

**Ústav stavebníctva a architektúry SAV**



**Správa o činnosti organizácie SAV  
za rok 2017**

Bratislava  
január 2018

## **Obsah osnovy Správy o činnosti organizácie SAV za rok 2017**

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- A Zoznam zamestnancov a doktorandov organizácie k 31.12.2017*
- B Projekty riešené v organizácii*
- C Publikačná činnosť organizácie*
- D Údaje o pedagogickej činnosti organizácie*
- E Medzinárodná mobilita organizácie*
- F Vedecko-popularizačná činnosť pracovníkov organizácie SAV*

# 1. Základné údaje o organizácii

## 1.1. Kontaktné údaje

**Názov:** Ústav stavebníctva a architektúry SAV

**Riaditeľ:** Ing. Peter Matiašovský, CSc.

**Zástupca riaditeľa:** Prof. RNDr. Vladimír Sládek, DrSc.

**Vedecký tajomník:** Ing. Jozef Kriváček, CSc.

**Predseda vedeckej rady:** Mgr. Miroslav Kocifaj, PhD.

**Členovia snemu SAV:** Ing. Peter Matiašovský, CSc., Prof. Ing. Ján Sládek, DrSc.

**Adresa:** Dúbravská cesta 9, 845 03 Bratislava 45

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**Tel.:** 02/ 5477 3548

**Fax:** 02/ 5477 3548

**E-mail:** [usarstav@savba.sk](mailto:usarstav@savba.sk)

**Názvy a adresy detašovaných pracovísk:** nie sú

**Vedúci detašovaných pracovísk:** nie sú

**Typ organizácie:** Príspevková od roku 1994

## 1.2. Údaje o zamestnancoch

Tabuľka 1a Počet a štruktúra zamestnancov

| Štruktúra zamestnancov  | K  | K  |    | K<br>do 35<br>rokov |   | F  | P     | T     |
|---|----|----|----|---------------------|---|----|-------|-------|
|   |    | M  | Ž  | M                   | Ž |    |       |       |
| <b>Celkový počet zamestnancov</b>   | 49 | 26 | 23 | 3                   | 3 | 49 | 43,67 | 23,18 |
| <b>Vedeckí pracovníci</b>   | 23 | 17 | 6  | 2                   | 2 | 23 | 21,05 | 20,65 |
| <b>Odborní pracovníci VŠ</b><br>(výskumní a vývojoví zamestnanci <sup>1</sup> ) | 5  | 2  | 3  | 1                   | 1 | 5  | 3,53  | 2,53  |
| <b>Odborní pracovníci VŠ</b><br>(ostatní zamestnanci <sup>2</sup> )             | 5  | 1  | 4  | 0                   | 0 | 5  | 2,01  | 0     |
| <b>Odborní pracovníci ÚS</b>  | 11 | 3  | 8  | 0                   | 0 | 11 | 12,08 | 0     |
| <b>Ostatní pracovníci</b>   | 5  | 3  | 2  | 0                   | 0 | 5  | 5     | 0     |

<sup>1</sup> odmeňovaní podľa 553/2003 Z.z., príloha č. 5

<sup>2</sup> odmeňovaní podľa 553/2003 Z.z., príloha č. 3 a č. 4

*K – kmeňový stav zamestnancov v pracovnom pomere k 31.12.2017 (uvádzať zamestnancov v pracovnom pomere, vrátane riadnej materskej dovolenky, zamestnancov pôsobiacich v zahraničí, v štátnych funkciách, členov Predsedníctva SAV, zamestnancov pôsobiacich v zastupiteľských zboroch)*

*F – fyzický stav zamestnancov k 31.12.2017 (bez riadnej materskej dovolenky, zamestnancov pôsobiacich v zahraničí v štátnych funkciách, členov Predsedníctva SAV, zamestnancov pôsobiacich v zastupiteľských zboroch)*

*P – celoročný priemerný prepočítaný počet zamestnancov*

*T – celoročný priemerný prepočítaný počet riešiteľov projektov*

M, Ž – muži, ženy

Tabuľka 1b Štruktúra vedeckých pracovníkov (kmeňový stav k 31.12.2017)

| Rodová skladba | Pracovníci s hodnosťou |           |       |      | Vedeckí pracovníci v stupňoch |       |       |
|----------------|------------------------|-----------|-------|------|-------------------------------|-------|-------|
|                | DrSc.                  | CSc./PhD. | prof. | doc. | I.                            | II.a. | II.b. |
| <b>Muži</b>    | 2                      | 14        | 3     | 0    | 2                             | 6     | 9     |
| <b>Ženy</b>    | 0                      | 5         | 1     | 0    | 0                             | 2     | 4     |

Tabuľka 1c Štruktúra pracovníkov podľa veku a rodu, ktorí sú riešiteľmi projektov

| Veková štruktúra (roky) | < 31 | 31-35 | 36-40 | 41-45 | 46-50 | 51-55 | 56-60 | 61-65 | > 65 |
|-------------------------|------|-------|-------|-------|-------|-------|-------|-------|------|
| <b>Muži</b>             | 1    | 5     | 2     | 0     | 2     | 1     | 1     | 5     | 1    |
| <b>Ženy</b>             | 2    | 1     | 1     | 1     | 0     | 1     | 1     | 1     | 0    |

Tabuľka 1d Priemerný vek zamestnancov organizácie k 31.12.2017

|              | Kmeňoví zamestnanci |      | Vedeckí pracovníci |      | Riešitelia projektov |      |
|--------------|---------------------|------|--------------------|------|----------------------|------|
|              | A                   | B    | A                  | B    | A                    | B    |
| <b>Muži</b>  | 52,0                | 51,5 | 50,0               | 49,2 | 48,3                 | 48,4 |
| <b>Ženy</b>  | 51,9                | 52,6 | 43,5               | 42,0 | 43,2                 | 43,8 |
| <b>Spolu</b> | 51,9                | 52,1 | 48,3               | 47,2 | 46,8                 | 47,0 |

A - Prepočet bez zohľadnenia úväzkov zamestnancov

B - Prepočet so zohľadnením úväzkov zamestnancov

### 1.3. Iné dôležité informácie k základným údajom o organizácii a zmeny za posledné obdobie (v zameraní, v organizačnej štruktúre a pod.)

## 2. Vedecká činnosť

### 2.1. Domáce projekty

Tabuľka 2a Domáce projekty riešené v roku 2017

| ŠTRUKTÚRA PROJEKTOV  | Počet |   | Čerpané financie (€) |                 |                 |                 |                |                 |
|--|-------|---|----------------------|-----------------|-----------------|-----------------|----------------|-----------------|
|  | A     | B | A                    |                 |                 |                 | B              |                 |
|  |       |   | Zo zdrojov SAV       |                 | Z iných zdrojov |                 | Zo zdrojov SAV | Z iných zdrojov |
|  |       |   | Spolu                | Pre organizáciu | Spolu           | Pre organizáciu |                |                 |
| 1. Projekty VEGA   | 8     | 1 | 60212                | 50225           | -               | -               | 1043           | -               |
| 2. Projekty APVV   | 5     | 0 | -                    | -               | 258500          | 232049          | -              | -               |
| 3. Projekty OP ŠF  | 0     | 0 | -                    | -               | -               | -               | -              | -               |
| 4. Projekty SASPRO   | 1     | 0 | 24319                | 24319           | 16212           | 16212           | -              | -               |
| 5. Projekty centier excelentnosti SAV  | 0     | 1 | -                    | -               | -               | -               | -              | -               |
| 6. Iné projekty (FM EHP, ŠPVV, Vedecko-technické projekty, ESF, na objednávku rezortov a pod.) | 0     | 0 | -                    | -               | -               | -               | -              | -               |

A - organizácia je nositeľom projektu

B - organizácia sa zmluvne podieľa na riešení projektu

Tabuľka 2b Domáce projekty podané v roku 2017

| Štruktúra projektov                     | Miesto podania | Organizácia je nositeľom projektu | Organizácia sa zmluvne podieľa na riešení projektu |
|---|----------------|-----------------------------------|--|
| 1. Účasť na nových výzvach APVV r. 2017 | -              |                                   |  |
| 2. Projekty výziev OP ŠF podané r. 2017 | Bratislava     |                                   |  |
|   | Regióny        |                                   |  |

## 2.2. Medzinárodné projekty

### 2.2.1. Medzinárodné projekty riešené v roku 2017

Tabuľka 2c Medzinárodné projekty riešené v roku 2017

| ŠTRUKTÚRA PROJEKTOV  | Počet |   | Čerpané financie (€) |                 |                 |                 |                |                 |
|--|-------|---|----------------------|-----------------|-----------------|-----------------|----------------|-----------------|
|  | A     | B | A                    |                 |                 |                 | B              |                 |
|  |       |   | Zo zdrojov SAV       |                 | Z iných zdrojov |                 | Zo zdrojov SAV | Z iných zdrojov |
|  |       |   | Spolu                | Pre organizáciu | Spolu           | Pre organizáciu |                |                 |
| <b>1. Projekty 7. RP EÚ a Horizont 2020</b>                          | 0     | 0 | -                    | -               | -               | -               | -              | -               |
| <b>2. Projekty ERA.NET, ESA, JRP</b>                                 | 0     | 0 | -                    | -               | -               | -               | -              | -               |
| <b>3. Projekty COST</b>  | 0     | 0 | -                    | -               | -               | -               | -              | -               |
| <b>4. Projekty EUREKA, NATO, UNESCO, CERN, IAEA, IVF, ERDF a iné</b> | 0     | 2 | -                    | -               | -               | -               | -              | -               |
| <b>5. Projekty v rámci medzivládnych dohôd</b>                       | 0     | 0 | -                    | -               | -               | -               | -              | -               |
| <b>6. Bilaterálne projekty MAD</b>                                   | 1     | 0 | 22000                | 22000           | -               | -               | -              | -               |
| <b>7. Bilaterálne projekty ostatné</b>                               | 0     | 0 | -                    | -               | -               | -               | -              | -               |
| <b>8. Podpora MVTs z národných zdrojov (SAV, APVV a iné)</b>         | 0     | 0 | -                    | -               | -               | -               | -              | -               |
| <b>9. Iné projekty</b>   | 0     | 1 | -                    | -               | -               | -               | -              | -               |

A - organizácia je nositeľom projektu

B - organizácia sa zmluvne podieľa na riešení projektu

## 2.2.2. Medzinárodné projekty Horizont 2020 podané v roku 2017

Tabuľka 2d Počet projektov Horizont 2020 v roku 2017

|  | A | B |
|--|---|---|
| Počet podaných projektov Horizont 2020 | 1 |   |

A - organizácia je nositeľom projektu

B - organizácia sa zmluvne podieľa na riešení projektu

Údaje k domácim a medzinárodným projektom sú uvedené v Prílohe B.

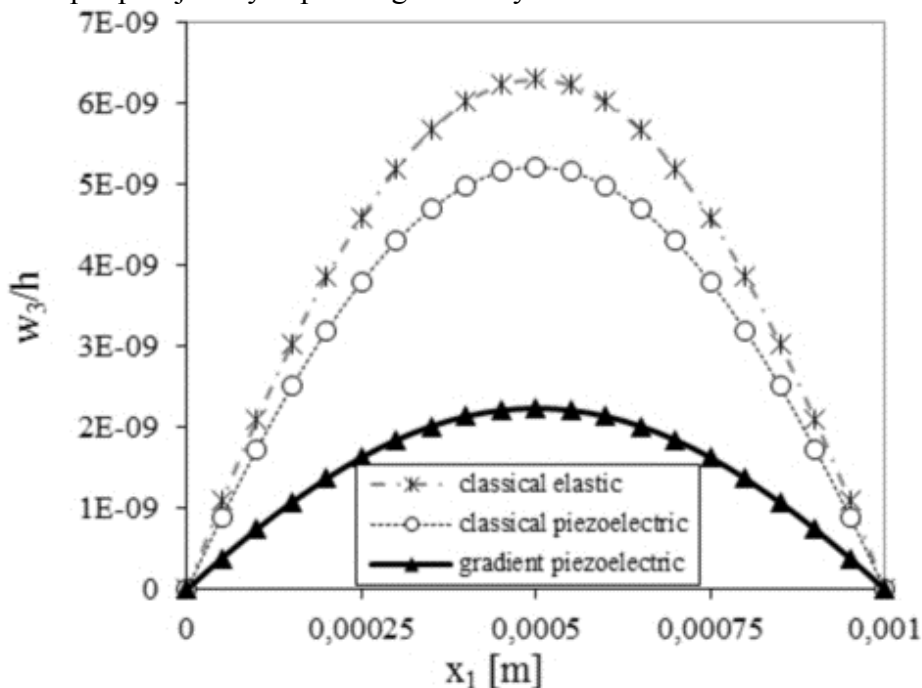
## 2.2.3. Zámery na čerpanie štrukturálnych fondov EÚ v ďalších výzvach

**2.3. Najvýznamnejšie výsledky vedeckej práce** (maximálne 1000 znakov + 1 obrázok; bibliografický údaj uvádzajte rovnako ako v zozname publikačnej činnosti, vrátane IF)

### 2.3.1. Základný výskum

Názov výsledku: **Pokročilé kontinuálne modely pre mikroštrukturálne efekty** (Advanced continuum models for micro-structural effects), Ján Sládek (APVV-14-0216).

Je všeobecne známe, že v klasických kontinuálnych modeloch mechaniky tuhých telies nie je zahrnutá mikroštruktúra materiálu, a preto v takejto teórii nie je možné vysvetliť pozorovateľné rozmerovo-veľkostné efekty (size effects). Pre konštrukcie mikro- a nano-rozmerov, kde tento vplyv je významný, existujú pokusy riešiť takéto úlohy pomocou atomistických modelov. Avšak extrémne veľké požiadavky na počítačovú pamäť robia tento prístup často neopužiteľným pre praktické úlohy. V dôsledku vnútorných nekonzistentností v multiškálových prístupov, keď sa objavujú sa určité nefyzikálne javy, je potrebné hľadať iný spoľahlivý a nenáročný model. Takými sa ukazujú byť pokročilé kontinuálne modely (gradientne kontinuálne teórie), kde uvážením gradientov vyšších rádov a dodatočnými fenomenologickými koeficientami je možné v konštitutívnych rovniciach modelovať mikroštrukturálne aspekty. Gradientné teórie vedú aj k eliminácii nefyzikálnych singularít vyskytujúcich sa v klasickej teórii kontinua. Vyššia materiálová tuhosť konštrukcií pozorovaná v gradientných modeloch je v súlade s experimentálnymi výsledkami, a teda podporuje zmyslupnosť gradientných teórií.



Obrázok: Priebeh priehybu dosky pozdĺž súradnice  $x_1$ .

ADCA SLÁDEK, Ján - SLÁDEK, Vladimír - HRCEK, S. - PAN, E. The nonlocal and gradient theories for a large deformation of piezoelectric nanoplates. In Composite Structures, 2017, vol. 172, p. 119-129. (3.858 - IF2016). ISSN 0263-8223.

ADCA SLÁDEK, Ján - SLÁDEK, Vladimír - WÜNSCHE, Michael - TAN, C. L. Crack analysis of size-dependent piezoelectric solids under a thermal load. In Engineering Fracture Mechanics, 2017, vol. 182, p. 187-201. (2.151 - IF2016). ISSN 0013-7944.

ADCA SLÁDEK, Ján - SLÁDEK, Vladimír - LU, H. H. H. - YOUNG, D. L. The FEM analysis of FGM piezoelectric semiconductor problems. In Composite Structures, 2017, vol. 163, p. 13-20. (3.858 - IF2016). ISSN 0263-8223.

ADCA SLÁDEK, Ján - SLÁDEK, Vladimír - PAN, E. Effective properties of coated fiber composites with piezoelectric and piezomagnetic phases. In Journal of Intelligent Material Systems and Structures, 2017, vol. 28, no. 1, p. 97-107. (2.255 - IF2016). ISSN 1045-389X.

ADCA SLÁDEK, Ján - SLÁDEK, Vladimír - STANÁK, Peter - PAN, E. FEM formulation for size-dependent theory with application to micro coated piezoelectric and piezomagnetic fiber-composites. In Computational Mechanics, 2017, vol. 59, no. 1, p. 93-105. (2.861 - IF2016). ISSN 0178-7675.

ADCA SLÁDEK, Ján - SLÁDEK, Vladimír - STANÁK, Peter - ZHANG, Ch. - TAN, C. L. Fracture mechanics analysis of size-dependent piezoelectric solids. In International Journal of Solids and Structures, 2017, vol. 113, p. 1-9. (2.760 - IF2016). ISSN 0020-7683.

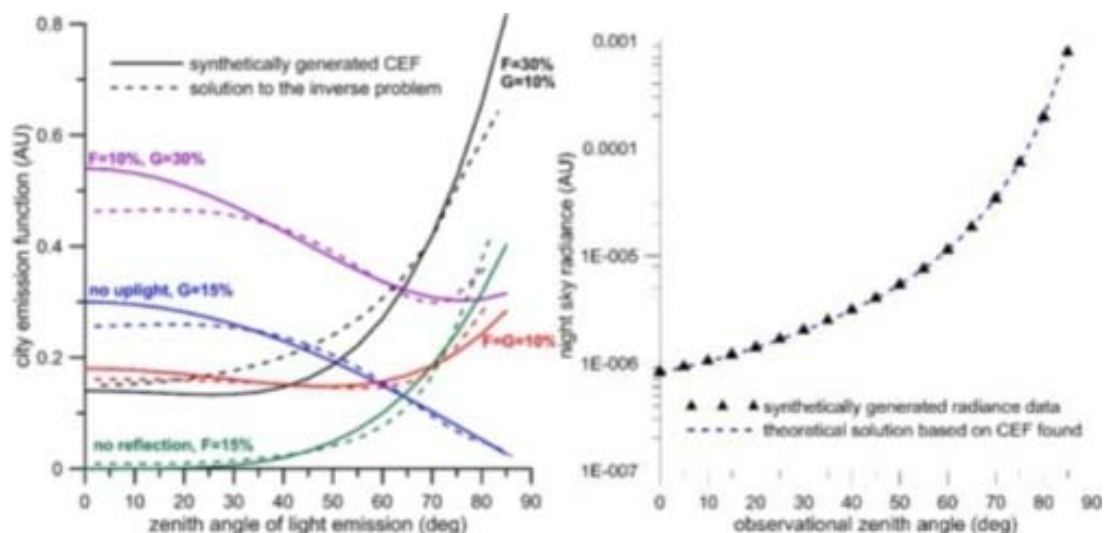
ADMB SLÁDEK, Ján - SLÁDEK, Vladimír - KASALA, J. - PAN, E. Nonlocal and Gradient Theories of Piezoelectric Nanoplates. In Procedia Engineering, 2017, vol. 190, p. 178-185. ISSN 1877-7058.

ADMB SLÁDEK, Ján - SLÁDEK, Vladimír - WÜNSCHE, Michael - TAN, C. L. Fracture mechanics analysis of size-dependent piezoelectric solids under a thermal load. In Key Engineering Materials, 2017, vol. 754, p. 165-168. ISSN 1013-9826.

Názov výsledku: **Dial'ková optická detekcia kumulatívnych pozemných svetelných emisií** (Retrieval of angular emission function from whole-city light sources), Miroslav Kocifaj (APVV-14-0017, VEGA 2/0016/16).

Dôsledkom narastajúcich svetelných emisií z miest, priemyselných zón a iných pozemných zdrojov je presvetlenie oblohy i vo vzdialenosti niekoľkých desiatok kilometrov. Predpoveď úrovni difúzneho svetla nie je možná bez tzv. kumulatívnej emisnej funkcie (CEF), ktorá je daná superpozíciou svetelných emisií zo všetkých mestských zdrojov. Priamy výpočet CEF nie je možný vzhľadom k neexistujúcej inventarizácii svetelných zdrojov a tiež k netriviálnym interreflexiám v nehomogénnom mestskom prostredí. V rámci riešenia projektu bol vôbec po prvý krát vytvorený a úspešne otestovaný model a algoritmus, v ktorom je CEF vypočítaná aplikovaním inverzného operátora na experimentálne dáta žiary oblohy (obr. dole). Metóda je použiteľná celosvetovo, pričom jedinou požiadavkou je uskutočnenie meraní v podmienkach jasnej oblohy. Metóda výrazne šetrí náklady, ktoré by boli potrebné na letecký prieskum svetelných emisií (napr. experiment realizovaný konkurenčným tímom v Berlíne: Remote Sens. Environ. 126, 39-50, 2012) a vo väčšine prípadov dokonca predstavuje jediný spôsob určenia CEF pre dané mesto.





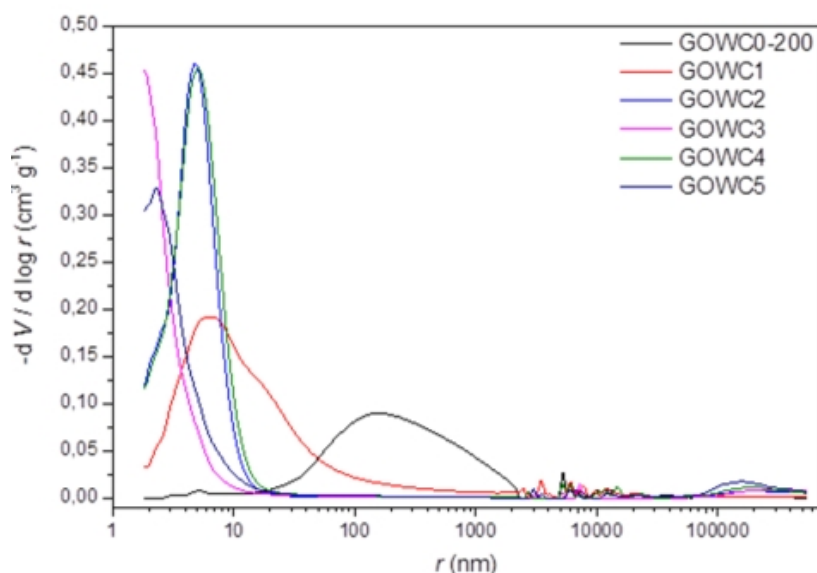
Obrázok vľavo ukazuje na dobrú zhodu medzi modelovou CEF (plná čiara) a CEF získanou inverziou meranej žiary oblohy (prerušovaná čiara). Obrázok vpravo dokumentuje úspešnosť metódy pri fitovaní vstupných dát žiary oblohy.

ADCA KOCIFAJ, Miroslav. Retrieval of angular emission function from whole-city light sources using night-sky brightness measurements. In *Optica*, 2017, vol. 4, no. 2, p. 255-262. (7.727 - IF2016). (2017 - Current Contents). ISSN 2334-2536.

ADCA SÁNCHEZ DE MIGUEL, A. - AUBÉ, Martin - ZAMORANO, J. - KOCIFAJ, Miroslav - ROBY, Johanne - TAPIA, C. Sky Quality Meter measurements in a colour-changing world. In *Monthly Notices of the Royal Astronomical Society*, 2017, vol. 476, p. 2966-2979. (4.961 - IF2016). (2017 - Current Contents, WOS, SCOPUS, NASA ADS). ISSN 0035-8711.

Názov výsledku: **Vývoj pórovej štruktúry zmesových cementov triedy G za hydrotermálnych podmienok** (Pore structure development of blended G-oil well cement submitted to hydrothermal curing conditions), Martin Tchingnabé Palou (APVV-15-0631).

Granulovaná vysokopecná troska (BFS) a kremičitý úlet (SF) boli použité na zlepšenie vlastností cementu triedy G za hydrotermálnych podmienok (1.2 MPa, 200 °C). Študovaný bol vývoj pórovej štruktúry v závislosti od fázového zloženia. Neželaná transformácia C-S-H fáz na  $\alpha$ -C<sub>2</sub>SH a C<sub>6</sub>S<sub>2</sub>H<sub>3</sub> a korešpondujúce zhoršenie štruktúry v referenčných vzorkách bolo potlačené už v prípade substitúcie cementu v množstve zodpovedajúcom 20 hm. %. V závislosti od množstva BFS a SF boli vo vzorkách detegované C-S-H fázy s C/S pomerom  $\sim 1$  a C-A-S-H fázy. Karbonizácia a tvorba kalcitu z vateritu zvýšila celkovú porozitu. Transformácia cez aragonit mala naopak opačný vplyv a viedla k zvýšeniu podielu gélových pórov.



Obrázok: Vplyv zloženia na distribúciu veľkostí pórov vo vzorkách autoklávovaných pri tlaku 1.2 MPa a teplote 200 °C.

ADCA KUZIELOVÁ, Eva - ŽEMLIČKA, Matúš - MÁSILKO, J. - PALOU, Martin T. Pore structure development of blended G-oil well cement submitted to hydrothermal curing conditions. In Geothermics, 2017, vol. 68, p. 86–93. (2.553 - IF2016). ISSN 0375-6505.

AFC KUZIELOVÁ, Eva - ŽEMLIČKA, Matúš - MÁSILKO, J. - PALOU, Martin T. Effect of composition on microstructure and phase development of hydrothermally cured G-Oil Well cement. In Non-Traditional Cement & Concrete VI : proceedings of the international conference. Edited by Vlastimil Bílek, Zbyněk Keršner, Hana Šimonová. - Brno : Brno University of Technology, 2017, p. 188-195. ISBN 978-80-214-5507-8.

AFG KUZIELOVÁ, Eva - ŽEMLIČKA, Matúš - MÁSILKO, J. - PALOU, Martin T. Relationship among phase composition - pore structure - strength characteristics of hydrothermally cured cement Class G. In JTACC+V4, 1st Journal of Thermal Analysis and Calorimetry Conference and 6th V4 (Joint Czech-Hungarian-Polish-Slovakian) Thermoanalytical Conference, june 6-9, 2017 / Budapest : book of abstracts [elektronický zdroj]. - Budapest : Akadémiai Kiadó, 2017, p. 136. ISBN 978-963-454-098-4

### 2.3.2. Aplikačný typ

#### 2.3.3. Medzinárodné vedecké projekty

Názov výsledku: **Vysvetlenie granulárnych prúdov v hustých náhodne usporiadaných mikro-štruktúrach** (Formation of granular flows in densely packed disperse microstructured media), Miroslav Kocifaj (APVV-14-0017).

Teória interakcie elektromagnetického žiarenia s granulárnymi systémami s vysokou hustotou vytvorená na oddelení stavebnej fyziky naznačuje, že priestorová korelácia medzi časticami môže viesť k podstatným zmenám v prenose žiarenia či tepla. Okrem zjavných aplikácií v materiálovom výskume táto teória tiež predpovedala mechanizmus svetlom-indukovaných mechanických procesov v granulárnej štruktúre za podmienok nízkeho tlaku, čo vyvolalo spoluprácu s CNRS (Francúzsko), kde riešili podobný problém pre disperzné systémy častíc regolitu. Fyzikálny princíp týchto procesov spočíva v inverznom teplotnom gradiente, ktorý vzniká v podpovrchových vrstvách granulátu. Rozptyl žiarenia v systéme s vysokou hustotou nehomogenít je charakterizovaný zložitými fázovými vzťahmi medzi jednotlivými optickými signálmi, čo ovplyvňuje radiačný prenos v celom objeme a následne vyvoláva zmeny v nahrievaní podpovrchových vrstiev, včítane tam zachyteného plynu. Rozdiel teplôt vyvoláva zmeny tlaku a pohyb plynu a častíc v danom systéme. Experiment vykonaný ešte v rokoch 2010 v spolupráci s Nemeckom potvrdil tento mechanizmus v laboratórnych podmienkach.“ (viď obrázok dole). Ukazuje sa, že zmenou rozmeru, morfológie či chemického zloženia častíc možno cielene ovplyvňovať tepelno-optické vlastnosti celého systému, čo má využitie v mnohých oblastiach vedy, a umožňuje bezkontaktnú optickú diagnostiku disperzných prostredí.



Obrázok: Svetlom-indukovaná emisia častíc z granulárneho systému s vysokou hustotou.

ADCA SCHMIDT, F. - ANDRIEU, F. - COSTARD, F. - KOCIFAJ, Miroslav - MERESSECU, A. G. Formation of recurring slope lineae on Mars by rarefied gas-triggered granular flows. In Nature geoscience, 2017, vol. 10, p. 1-5. (13.941 - IF2016). (2017 - Current Contents). ISSN 1752-0894.

#### 2.3.4. Ďalšie významné výsledky

**Nezámerná kontinuita** (Unintended continuity) – Bratislava sa javí ako mesto nedokončených zámerov, nerealizovaných plánov a náhodných riešení. Aktuálne výskumy však odhalili určitý mechanizmus pretrvávania kľúčových ideí, ktorý sme označili ako fenomén nezámernej kontinuity. Ide o nevedomé, respektíve nedeclarované nadväzovanie na vízie a zámery predchádzajúcich období, o dosiahnutie určitej kritickej masy poznatkov, ktoré sa stanú súčasťou povedomia o meste a spolu s jeho prírodnými danosťami a morfológiou potom „podvedome“ ovplyvňujú premýšľanie architektov, urbanistov ale aj investorov. Ako názorný príklad by sme mohli uviesť prvý plán rastu a regulácie Bratislavy z roku 1917 a uplatnenie jeho ideí v neskoršom plánovaní a výstavbe. V rámci skúmania vývoja urbanistickej štruktúry Bratislavy v minulom storočí sa podarilo objaviť, identifikovať a opísať viacero urbanistických koncepcií, ktoré boli činiteľmi nezámernej kontinuity. Medzi najväčšie objavy patrí trojica pôvodných regulačných plánov Bratislavy (J. Laubner, 1898 – 1906; V. Bernárdt, 1905; A. Palóczy, 1906 – 1917) a urbanistické štúdie historického jadra mesta a územia Petržalky z prvej polovice 20. Storočia (J. Marek, 1930 a 1935), ako aj ich interpretácia v kontexte neskoršieho vývoja mesta. Výskum analyzoval, na príklade mesta Bratislava, vplyv radikálnych urbanistických vízií neskorého modernizmu a ich fragmentárnych realizácii na kontinuitu vývoju mestského plánovania. Výskum potvrdil, že takéto nestabilné fragmenty generujú v mestskom priestore repetitívne nové začiatky. Výskum súčasne potvrdil, že aj koncept ruiny urbanistického plánu ako stabilizovaného prvku v urbánnom priestore, má potenciál prekonať rozpory diskontuity plánovania (Henrieta Moravčíková VEGA 2/0074/17, APVV-16-0584, práce: ADDB01, ADDB02, ADFB03, ADNB01).

**Najmenšia únosnosť tlačných ocelových stĺpov s tenkostenným za studena tvarovaným priečnym rezom s imperfekciami zohľadňujúcimi výrobné tolerancie** (The least ultimate buckling strength of cold-formed steel columns subjected to axial compression considering imperfection levels limited by execution tolerances) – Bola vypracovaná metodika modelovania medznej únosnosti stĺpov v osovom tlaku založená na geometricky a materiálovo nelineárnej konečno prvkovej analýze konštrukcií s imperfekciami (GMNIA). Na výpočet najmenšej únosnosti sa uvažujú geometrické imperfekcie v podobe vlastných tvarov zodpovedajúceho linearizovaného problému pružnej stability a ich kombinácie. Imperfekcie sa normalizujú podľa energetickej miery *EM*, ktorá je definovaná ako druhá odmocnina z energie pružných pomerných deformácií hypoteticky potrebnej na zdeformovanie pôvodne ideálneho stĺpa do uvažovaného imperfektného tvaru. Vyhľadávanie najmenšej únosnosti sa realizuje na úrovni *EM* zodpovedajúcej výrobným toleranciam. Porovnávanie imperfekcií s rovnakou hladinou energetickej miery vylučuje výpočty únosností s nereálnymi — energeticky náročnými imperfekciami, ktoré by mohli viesť na značne konzervatívny návrh konštrukcie. Zavedené pojmy umožňujú aplikáciu metodiky aj na iné typy konštrukčných prvkov a dielov (Jozef Kriváček, VEGA 2/0154/15, práce: ADCA12, ADMB03).

**2.4. Publikačná činnosť** (zoznam je uvedený v prílohe C)

Tabuľka 2e Štatistika vybraných kategórií publikácií

| <b>PUBLIKAČNÁ A EDIČNÁ ČINNOSŤ</b>   | <b>Počet v r. 2017/<br/>doplňky z r. 2016</b> |
|--|---|
| <b>1. Vedecké monografie a monografické štúdie vydané v domácich vydavateľstvách (AAB, ABB)</b>  | <b>0 / 0</b>                                  |
| <b>2. Vedecké monografie a monografické štúdie vydané v zahraničných vydavateľstvách (AAA, ABA)</b>  | <b>1 / 0</b>                                  |
| <b>3. Odborné monografie, vysokoškolské učebnice a učebné texty vydané v domácich vydavateľstvách (BAB, ACB, CAB)</b>                          | <b>0 / 0</b>                                  |
| <b>4. Odborné monografie a vysokoškolské učebnice a učebné texty vydané v zahraničných vydavateľstvách (BAA, ACA, CAA)</b>                     | <b>0 / 0</b>                                  |
| <b>5. Kapitoly vo vedeckých monografiách vydaných v domácich vydavateľstvách (ABD)</b>   | <b>0 / 0</b>                                  |
| <b>6. Kapitoly vo vedeckých monografiách vydaných v zahraničných vydavateľstvách (ABC)</b>   | <b>1 / 0</b>                                  |
| <b>7. Kapitoly v odborných monografiách, vysokoškolských učebniciach a učebných textoch vydaných v domácich vydavateľstvách (BBB, ACD)</b>     | <b>0 / 0</b>                                  |
| <b>8. Kapitoly v odborných monografiách, vysokoškolských učebniciach a učebných textoch vydaných v zahraničných vydavateľstvách (BBA, ACC)</b> | <b>0 / 0</b>                                  |
| <b>9. Vedecké práce registrované v Current Contents Connect (ADCA, ADCB, ADDA, ADDB)</b>   | <b>28 / 0</b>                                 |
| <b>10. Vedecké práce registrované vo Web of Science Core Collection alebo Scopus (ADMA, ADMB, ADNA, ADNB)</b>                                  | <b>16 / 0</b>                                 |
| <b>11. Vedecké práce v ostatných domácich časopisoch (ADFA, ADFB)</b>  | <b>3 / 0</b>                                  |
| <b>12. Vedecké práce v ostatných zahraničných časopisoch (ADEA, ADEB)</b>  | <b>4 / 0</b>                                  |
| <b>13. Vedecké práce v domácich recenzovaných zborníkoch (AEDA)</b>  | <b>7 / 0</b>                                  |
| <b>14. Vedecké práce v zahraničných recenzovaných zborníkoch (AECA)</b>  | <b>9 / 0</b>                                  |
| <b>15. Publikované príspevky na domácich vedeckých konferenciách (AFB, AFD)</b>  | <b>2 / 0</b>                                  |
| <b>16. Publikované príspevky na zahraničných vedeckých konferenciách (AFA, AFC)</b>  | <b>22 / 0</b>                                 |
| <b>17. Vydané periodiká evidované v CCC, WoS Core Collection, SCOPUS</b>   | <b>1</b>                                      |
| <b>18. Ostatné vydané periodiká</b>  | <b>0</b>                                      |
| <b>19. Zostavovateľské práce knižného charakteru (FAI)</b>   | <b>0 / 0</b>                                  |
| <b>20. Preklady vedeckých a odborných textov (EAJ)</b>   | <b>0 / 0</b>                                  |
| <b>21. Heslá v odborných terminologických slovníkoch a encyklopédiách (BDA, BDB)</b>   | <b>0 / 0</b>                                  |
| <b>22. Recenzie v časopisoch a zborníkoch (EDI)</b>  | <b>2 / 0</b>                                  |

*Evidujú len tie práce zamestnancov a doktorandov, v ktorých je uvedená afiliácia k organizácii*

Tabuľka 2f Štatistika vedeckých prác podľa kvartilu vedeckého časopisu

| <b>Kvartil vedeckého časopisu</b>   | <b>Q1</b> | <b>Q2</b> | <b>Q3</b> | <b>Q4</b> | <b>Spolu</b> |
|---|-----------|-----------|-----------|-----------|--------------|
| <b>Podľa IF z r. 2016 (zdroj JCR)</b><br><i>Počet článkov / doplnky 2015</i>      | 14 / 0    | 11 / 0    | 2 / 0     | 1 / 0     | 28 / 0       |
| <b>Podľa SJR z r. 2016 (zdroj Scimago)</b><br><i>Počet článkov / doplnky 2015</i> | 23 / 0    | 4 / 0     | 3 / 0     | 3 / 0     | 33 / 0       |

Tabuľka 2g Ohlasy

| <b>OHLASY</b>  | <b>Počet v r. 2016/<br/>doplnky z r. 2015</b> |
|--|---|
| <b>Citácie vo WOS (1.1, 2.1)</b>   | 592 / 14                                      |
| <b>Citácie v SCOPUS (1.2, 2.2)</b>   | 33 / 1  |
| <b>Citácie v iných citačných indexoch a databázach (9, 10, 3.2, 4.2)</b>             | 0 / 0   |
| <b>Citácie v publikáciách neregistrovaných v citačných indexoch (3, 4, 3.1, 4.1)</b> | 22 / 2  |
| <b>Recenzie na práce autorov z organizácie (5, 6, 7, 8)</b>                          | 0 / 0   |

## 2.5. Aktívna účasť na vedeckých podujatiach

Tabuľka 2h Vedecké podujatia

|  |    |
|--|----|
| <b>Prednášky a vývesky na medzinárodných vedeckých podujatiach</b> | 40 |
| <b>Prednášky a vývesky na domácich vedeckých podujatiach</b>       | 5  |

## 2.6. Vyžiadané prednášky

### 2.6.1. Vyžiadané prednášky na medzinárodných vedeckých podujatiach

M. T. Palou: Application of thermoanalytical methods to investigate glass transformation and cement hydration. In TAS 2017 - Termoanalytický seminár, 10 October 2017, Ostrava, Česko.

V. Sládek: Thermoelastic analysis of bending problems in FGM plates, In: BEM/MRM 40 (40th Int. Conf. On Boundary Elements and other Mesh Reduction Methods), 12-14 September 2017, New Forest, UK.

J. Sládek: Crack analysis of piezoelectric solids under a thermal load, In: Proc. of the 18th International Scientific Conf. TRANSFER 2017, 23-24 November 2017, Trenčianske Teplice, Slovensko.

### 2.6.2. Vyžiadané prednášky na domácich vedeckých podujatiach

### 2.6.3. Vyžiadané prednášky na významných vedeckých inštitúciách

P. Szalay: New world - Bratislava and Czech modernism. Belehrad, v rámci podujatia BINA 2017 (Medzinárodný mesiac architektúry v Belehrade), 19. 5. 2017.

P. Szalay: „Len ďalšie dielo Petra Behrensa“ k rekonštrukciám Neologckej synagógy v Žiline. Praha, Fakulta architektúry ČVUT 28. 1. 2017.

*Ak boli príspevky publikované, sú súčasťou prílohy C, kategória (AFC, AFD, AFE, AFF, AFG, AFH)*

**2.7. Patentová a licenčná činnosť na Slovensku a v zahraničí v roku 2017****2.7.1. Vynálezy, na ktoré bol udelený patent****2.7.2. Prihlásené vynálezy****2.7.3. Predané licencie****2.7.4. Realizované patenty**

*Finančný prínos pre organizáciu SAV v roku 2017 a súčet za predošlé roky sa neuvádzajú, ak je zverejnenie v rozpore so zmluvou súvisiacou s realizáciou patentu.*

**2.8. Účasť expertov na hodnotení národných projektov (APVV, VEGA a iných)**

Tabuľka 2i Experti hodnotiaci národné projekty

| Meno pracovníka    | Typ programu/projektu/výzvy | Počet hodnotených projektov |
|--------------------|-----------------------------|-----------------------------|
| Darula Stanislav   | KEGA                        | 1                           |
| Kocifaj Miroslav   | APVV VV 2016                | 1                           |
| Koronthályová Oľga | APVV VV 2016                | 1                           |
| Kriváček Jozef     | APVV VV 2016                | 1                           |
| Križma Martin      | VEGA                        | 1                           |
| Kuzielová Eva      | VEGA                        | 2                           |
| Matiašovský Peter  | VEGA                        | 3                           |
| Sládek Vladimír    | APVV VV 2016                | 2                           |

**2.9. Účasť na spracovaní hesiel do encyklopédie Beliana**

Počet autorov hesiel: 1

**2.10. Recenzovanie publikácií a príspevkov vo vedeckých časopisoch**

Tabuľka 2j Počet recenzovaných monografií, článkov, zborníkov

| Meno pracovníka        | Knížné monografie |             | Príspevky v časopisoch |              |         | Zborníky |             |
|------------------------|-------------------|-------------|------------------------|--------------|---------|----------|-------------|
|                        | Domáce            | Zahra-ničné | WoS, SCOPUS            | Iné databázy | Ostatné | Domáce   | Zahra-ničné |
| Darula Stanislav       | 0                 | 0           | 1                      | 0            | 2       | 0        | 6           |
| Kocifaj Miroslav       | 0                 | 0           | 18                     | 0            | 0       | 0        | 1           |
| Kómar Ladislav         | 0                 | 0           | 6                      | 0            | 0       | 0        | 0           |
| Koronthályová Oľga     | 0                 | 0           | 2                      | 0            | 2       | 0        | 2           |
| Kuzielová Eva          | 0                 | 0           | 1                      | 0            | 0       | 0        | 0           |
| Matiašovský Peter      | 1                 | 0           | 4                      | 0            | 0       | 0        | 6           |
| Palou Martin-Tchingabé | 0                 | 0           | 15                     | 5            | 0       | 0        | 15          |

|                  |          |          |           |          |          |          |           |
|------------------|----------|----------|-----------|----------|----------|----------|-----------|
| Petržala Jaromír | 0        | 0        | 1         | 0        | 0        | 0        | 0         |
| Sládek Ján       | 0        | 0        | 15        | 0        | 0        | 0        | 0         |
| Sládek Vladimír  | 0        | 0        | 6         | 2        | 0        | 0        | 0         |
| Szalay Peter     | 0        | 0        | 2         | 0        | 0        | 0        | 0         |
| <b>Spolu</b>     | <b>1</b> | <b>0</b> | <b>71</b> | <b>7</b> | <b>4</b> | <b>0</b> | <b>30</b> |

## 2.11. Iné informácie k vedeckej činnosti.

### 3. Doktorandské štúdium, iná pedagogická činnosť a budovanie ľudských zdrojov pre vedu a techniku

#### 3.1. Údaje o doktorandskom štúdiu

Tabuľka 3a Počet doktorandov v roku 2017

| Forma                        | Počet k 31.12.2017 |   |                    |   |           |   | Počet ukončených doktorantúr v r. 2017 |   |                     |   |                     |   |
|------------------------------|--------------------|---|--------------------|---|-----------|---|--|---|---------------------|---|---------------------|---|
|                              | Doktorandi         |   |                    |   |           |   | Ukončenie z dôvodov                    |   |                     |   |                     |   |
|                              | celkový počet      |   | z toho novoprijatí |   | po skúške |   | ukončenie úspešnou obhajobou           |   | predčasné ukončenie |   | neúspešné ukončenie |   |
|                              | M                  | Ž | M                  | Ž | M         | Ž | M                                      | Ž | M                   | Ž | M                   | Ž |
| <b>Denná zo zdrojov SAV</b>  | 0                  | 1 | 0                  | 1 | 0         | 0 | 0                                      | 0 | 0                   | 0 | 0                   | 0 |
| <b>Denná z iných zdrojov</b> | 0                  | 0 | 0                  | 0 | 0         | 0 | 0                                      | 0 | 0                   | 0 | 0                   | 0 |
| <b>Externá</b>               | 0                  | 0 | 0                  | 0 | 0         | 0 | 0                                      | 0 | 0                   | 0 | 0                   | 0 |
| <b>Spolu</b>                 | 0                  | 1 | 0                  | 1 | 0         | 0 | 0                                      | 0 | 0                   | 0 | 0                   | 0 |
| <b>Súhrn</b>                 | 1                  |   | 1                  |   | 0         |   | 0                                      |   | 0                   |   | 0                   |   |

*Uvádzajte len doktorandov organizácie ako externej vzdelávacej inštitúcie*

#### 3.2. Zmena formy doktorandského štúdia

Tabuľka 3b Počty preradení z dennej formy na externú a z externej na dennú

| Pôvodná forma | Denná z prostriedkov SAV | Denná z prostriedkov SAV | Denná z iných zdrojov    | Denná z iných zdrojov | Externá                  | Externá               |
|---------------|--------------------------|--------------------------|--------------------------|-----------------------|--------------------------|-----------------------|
| Nová forma    | Denná z iných zdrojov    | Externá                  | Denná z prostriedkov SAV | Externá               | Denná z prostriedkov SAV | Denná z iných zdrojov |
| <b>Počet</b>  | 0                        | 0                        | 0                        | 0                     | 0                        | 0                     |

#### 3.3. Zoznam doktorandov, ktorí ukončili doktorandské štúdium úspešnou obhajobou

Tabuľka 3c Menný zoznam ukončených doktorandov v roku 2017 úspešnou obhajobou

| Meno doktoranda | Forma DŠ | Mesiac, rok nástupu na DŠ | Mesiac, rok obhajoby | Číslo a názov študijného odboru | Meno a organizácia školiteľa | Fakulta udeľujúca vedeckú hodnotu |
|-----------------|----------|---------------------------|----------------------|---------------------------------|------------------------------|-----------------------------------|
|-----------------|----------|---------------------------|----------------------|---------------------------------|------------------------------|-----------------------------------|

*Zoznam interných a externých doktorandov je uvedený v prílohe A.*



### 3.4. Medzinárodné doktorandské štúdium

Tabuľka 3d Počet študentov v medzinárodných programoch doktorandského štúdia

| Cotutelle | Co-direction | Iné | Zahraniční doktorandi |
|-----------|--------------|-----|-----------------------|
| 0         | 0            | 0   | 0                     |

### 3.5. Zoznam akreditovaných študijných odborov s uvedením VŠ

Tabuľka 3e Zoznam akreditovaných študijných odborov s uvedením univerzity/vysokej školy a fakulty, kde sa doktorandský študijný program uskutočňuje

| Názov študijného odboru (ŠO) | Číslo ŠO | Doktorandské štúdium uskutočňované na<br>(univerzita/vysoká škola a fakulta) |
|------------------------------|----------|--|
| stavebníctvo                 | 5.2.8    | STU / Stavebná fakulta   |

Tabuľka 3f Účasť na pedagogickom procese

| Menný prehľad pracovníkov, ktorí boli menovaní do spoločných odborových komisií pre doktorandské štúdium | Menný prehľad pracovníkov, ktorí pôsobili ako členovia vedeckých rád univerzít, správnych rád univerzít a fakúlt | Menný prehľad pracovníkov, ktorí získali vyššiu vedeckú, pedagogickú hodnosť alebo vyšší kvalifikačný stupeň |
|--|--|--|
| Ing. Stanislav Darula, CSc.<br>(pozemné stavby)  | Ing. Stanislav Darula, CSc.<br>(Stavebná fakulta TUKE)   | PhDr. Katarína Haberlandová,<br>PhD. (PhD., Fakulta architektúry STU)  |
| Ing. Stanislav Darula, CSc.<br>(elektroenergetika)   | Ing. Peter Matiašovský, CSc.<br>(Slovenská technická univerzita v Bratislave)                                    | Ing. arch. Laura Pastoreková,<br>PhD. (PhD., Fakulta architektúry STU)                                       |
| Ing. Martin Križma, PhD.<br>(inžinierske konštrukcie a dopravné stavby)                                  | Ing. Peter Matiašovský, CSc.<br>(Stavebná fakulta STU)   |  |
| Ing. Martin Križma, PhD.<br>(stavebníctvo)   | prof. Dr. Ing. arch. Henrieta Moravčíková (Fakulta architektúry STU)   |  |
| Ing. Peter Matiašovský, CSc.<br>(pozemné stavby)   |  |  |
| Ing. Peter Matiašovský, CSc.<br>(stavebníctvo)   |  |  |
| prof. Dr. Ing. arch. Henrieta Moravčíková (architektonická tvorba)                                       |  |  |
| prof. Dr. Ing. arch. Henrieta Moravčíková (architektúra a urbanizmus)                                    |  |  |
| Prof.Dr.Ing.<br>Martin-Tchingnabé Palou<br>(anorganická technológia a materiály)                         |  |  |

|  |  |  |
|--|--|--|
| Prof.Dr.Ing.<br>Martin-Tchingnabé Palou<br>(stavebníctvo)                                |  |  |
| Prof.Dr.Ing.<br>Martin-Tchingnabé Palou<br>(odbor v zahraničí)                           |  |  |
| Prof. Ing. Ján Sládek, DrSc.<br>(aplikovaná mechanika)                                   |  |  |
| Prof. RNDr. Vladimír Sládek,<br>DrSc. (aplikovaná mechanika)                             |  |  |
| Prof. RNDr. Vladimír Sládek,<br>DrSc. (numerická analýza a<br>vedecko-technické výpočty) |  |  |

**3.6. Údaje o pedagogickej činnosti**

Tabuľka 3g Prednášky a cvičenia vedené v roku 2017

| PEDAGOGICKÁ ČINNOSŤ                        | Prednášky |             | Cvičenia a semináre |             |
|--|-----------|-------------|---------------------|-------------|
|  | doma      | v zahraničí | doma                | v zahraničí |
| Počet prednášateľov alebo vedúcich cvičení | 3         | 0           | 2                   | 0           |
| Celkový počet hodín v r. 2017              | 60        | 0           | 47                  | 0           |

*Prehľad prednášateľov predmetov a vedúcich cvičení, s uvedením názvu predmetu, úväzku, katedry, fakulty, univerzity/vysokej školy je uvedený v prílohe D.*

Tabuľka 3h Aktivita pracovníkov na VŠ

|    |   |    |
|----|---|----|
| 1. | Počet pracovníkov, ktorí pôsobili ako vedúci alebo konzultanti diplomových a bakalárskych prác                                      | 4  |
| 2. | Počet vedených alebo konzultovaných diplomových a bakalárskych prác   | 10 |
| 3. | Počet pracovníkov, ktorí pôsobili ako škoolitelia doktorandov (PhD.)  | 2  |
| 4. | Počet školených doktorandov (aj pre iné inštitúcie)   | 3  |
| 5. | Počet oponovaných dizertačných a habilitačných prác   | 2  |
| 6. | Počet pracovníkov, ktorí oponovali dizertačné a habilitačné práce   | 2  |
| 7. | Počet pracovníkov, ktorí pôsobili ako členovia komisií pre obhajoby DrSc. prác  | 0  |
| 8. | Počet pracovníkov, ktorí pôsobili ako členovia komisií pre obhajoby PhD. prác   | 4  |
| 9. | Počet pracovníkov, ktorí pôsobili ako členovia komisií, resp. oponenti v inauguračnom alebo habilitačnom konaní na vysokých školách | 2  |

**3.7. Iné dôležité informácie k pedagogickej činnosti**

S. Darula - vyžiadaná prednáška na Ústave elektroenergetiky FEKT VUT v Brne, 2 hodiny.

S. Darula - člen komisie na štátne skúšky inžinierskeho štúdia v študijnom odbore Elektroenergetika na FEI STU v Bratislave.

S. Darula - člen komisie na štátne skúšky bakalárskeho štúdia v odbore Pozemné stavby na SvF STU v Bratislave.

## 4. Medzinárodná vedecká spolupráca

### 4.1. Medzinárodné vedecké podujatia

#### 4.1.1. Medzinárodné vedecké podujatia, ktoré organizácia SAV organizovala v roku 2017 alebo sa na ich organizácii podieľala, s vyhodnotením vedeckého a spoločenského prínosu podujatia

Svetelné znečistenie: Teória, modelovanie a meranie 2017, hotel Terradets, Cellers, Španielsko, 65 účastníkov, 27.06.-30.06.2017

Konferencia o svetelnom znečistení bola úspešným pokračovaním série organizovanej ústavom prvýkrát v roku 2013 v Bratislave a neskôr v roku 2015 v Québecu v Kanade. Konferencia v roku 2017 sa sústredila hlavne na numerické modelovanie, objasnenie vplyvu atmosféry na úroveň difúzneho svetla, spektrálne vlastnosti svetelných zdrojov a metódy merania. Hlavné témy konferencie boli: 1) teoretické koncepty a modelovanie svetelného znečistenia, 2) numerické modelovanie a simulácia experimentov, 3) úloha atmosférického aerosólu pri šírení svetelného znečistenia, 4) vplyv spektrálnych charakteristík svetelných zdrojov a odrazivosti povrchov, 5) pozorovacie techniky, dáta, a dátové produkty, a 6) dizajn a hodnotenie rôznych svetelných zdrojov a technológií. Vybrané príspevky budú publikované v špeciálnom čísle karentovaného časopisu Journal of Quantitative Spectroscopy and Radiative Transfer v roku 2018 (Guest editors: M. Kocifaj, M. Aubé a S. Ribas).

Spoluorganizátori konferencie: Cégep de Sherbrooke (Kanada), FMFI UK (Slovensko), Parc Astronomic Montsec (Španielsko), USTARCH SAV (Slovensko)

Neplánované / plánované mestá, Bratislava, 50 účastníkov, 08.11.-08.11.2017

Na podujatí prezentovali najnovšie výsledky svojho výskumu jedenásti bádatelia z Čiech, Srbska a Slovenska. Konfrontovali sa odlišné metodologické prístupy aj aktuálne poznatky o urbanistickom vývoji, plánovaní a stavbe európskych miest od konca 19 storočia až do súčasnosti. Podujatia sa zúčastnilo vyše 50 odborníkov z oblasti architektúry a urbanizmu.

#### 4.1.2. Medzinárodné vedecké podujatia, ktoré usporiada organizácia SAV v roku 2018 (anglický a slovenský názov podujatia, miesto a termín konania, meno, telefónne číslo a e-mail zodpovedného pracovníka)

Thermophysics 2018/Termofyzika 2018, Smolenice, 07.11.-09.11.2018, (Peter Matiašovský, 02/5930 9244, usarmat@savba.sk)

#### 4.1.3. Počet pracovníkov v programových a organizačných výboroch medzinárodných konferencií

Tabuľka 4a Programové a organizačné výbory medzinárodných konferencií

| Meno pracovníka   | Programový | Organizačný | Programový i organizačný |
|-------------------|------------|-------------|--------------------------|
| Darula Stanislav  | 1          | 1           | 0                        |
| Kocifaj Miroslav  | 0          | 0           | 1                        |
| Matiašovský Peter | 2          | 0           | 0                        |
| <b>Spolu</b>      | 3          | 1           | 1                        |

### 4.2. Členstvo a funkcie v medzinárodných orgánoch

#### **4.2.1. Členstvo a funkcie v medzinárodných vedeckých spoločnostiach, úniách a národných komitétach SR**

Ing. Stanislav Darula, CSc.

CIB - International Council for Research and Innovation in Building and Construction (funkcia: W67 - člen)

CIE - Commission Internationale de l' Eclairage (funkcia: Reprezentant SR v CIE Divízii 3)

CIE TC3-39, Discomfort Glare from Daylight in Buildings (funkcia: člen)

CIE TC3-52 Energy Performance of Buildings – Energy Requirements for Lighting (funkcia: člen)

IBPSA – the International Building Performance Simulation Associati (funkcia: člen)

Lux Europa Board of Directors (funkcia: člen, reprezentant Slovenska)

TC 3-54: Revision of CIE 16-1970: Daylight (funkcia: člen)

PhDr. Katarína Haberlandová, PhD.

DOCOMOMO International (funkcia: členka)

Mgr. Miroslav Kocifaj, PhD.

International Astronomical Union (funkcia: člen)

International Solar Energy Society (ISES) (funkcia: člen {silver member})

Optical Society of America (OSA) (funkcia: člen)

The Illuminating Engineering Society (funkcia: člen Sky Glow Committee)

prom. fyz. Oľga Koronthályová, CSc.

CIB W040 Heat and Moisture Transfer in Buildings (funkcia: člen)

Ing. Peter Matiašovský, CSc.

CIB - W40 Heat and Moisture Transfer in Buildings (funkcia: člen pracovnej skupiny)

prof. Dr. Ing. arch. Henrieta Moravčíková

Documentation and Conservation of Modern Movement (funkcia: member of the International comitee for landscape and town planing)

Documentation and Conservation of Modern Movement (funkcia: member of the International comitee for registers)

Prof.Dr.Ing. Martin-Tchingnabé Palou

CIB- International Council for Research and Innovation in Building and Construction (funkcia: Člen)

Prof. Ing. Ján Sládek, DrSc.

Central European Assoc. for Computational Mechanics (funkcia: člen)

Int. Soc. Comput. Eng. & Sciences (ICCES) (funkcia: člen)

Prof. RNDr. Vladimír Sládek, DrSc.

Central European Assoc. for Computational Mechanics (funkcia: člen)  
International Society for Boundary Elements (funkcia: člen )

Mgr. Peter Szalay, PhD.

DOCOMOMO International (funkcia: člen)

#### 4.3. Účasť expertov na hodnotení medzinárodných projektov (EÚ RP, ESF a iných)

Tabuľka 4b Experti hodnotiaci medzinárodné projekty

| Meno pracovníka  | Typ programu/projektu/výzvy     | Počet hodnotených projektov |
|------------------|---------------------------------|-----------------------------|
| Kocifaj Miroslav | National Science Centre, Poland | 2                           |

#### 4.4. Najvýznamnejšie prínosy MVTS ústavu vyplývajúce z mobility a riešenia medzinárodných projektov a iné informácie k medzinárodnej vedeckej spolupráci

S. Darula - Účasť na príprave projektu IEA SHC TAsk 61 Integrated Solutions for Daylighting and Electric Lighting: From component to user centered system efficiency. Projekt bol schvalený na dobu riešenia január 2018 - december 2021.

S. Darula - CEN/TC 169/WG 11 - Daylight, expert, člen spracovateľského kolektívu európskej normy prEN 17037 Daylight in Buildings.

Dr. Héctor Antonio Solano Lamphar a José Manuel Ramírez Bernardino absolvovali v septembri-októbri 2017 mesačný a trojtýždňový pracovný pobyt na ústave, pričom náklady spojené s mobilitou boli hradené z projektu Cátedras CONACYT # 2723 (México). Cieľom pobytu bola vedecká spolupráca, ktorá vyústila do spoločnej publikácie "Numerical research on the effects the skyglow could have in phytochromes and RQE photoreceptors of plants", In Journal of Environmental Management, 2018, vol. 209, p. 484-494. (4.010 - IF2016). Typ: ADCA.

Ústav tiež navštívil Bc. Alexandre Simoneau z Bishop's University (Sherbrooke, Canada), ktorý v čase od februára do júna spolupracoval s M. Kocifajom na témach interakcie žiarenia s malými časticami. Výsledkom spolupráce je spoločná publikácia "Submicrometer-sized nonspherical particle separation by laser beam", In Applied Optics, 2017, vol. 56, no. 29, p. 8081-8086. (1.650 - IF2016). (2017 - Current Contents). ISSN 0003-6935. Typ: ADCA.

*Prehľad údajov o medzinárodnej mobilite pracovníkov organizácie je uvedený v Prílohe E.*

*Prehľad a údaje o medzinárodných projektoch sú uvedené v kapitole 2 a Prílohe B.*

## **5. Vedná politika**

## **6. Spolupráca s univerzitami/vysokými školami, štátnymi a neziskovými inštitúciami okrem aktivít uvedených v kap. 2, 3, 4**

### **6.1. Spolupráca s univerzitami/VŠ (fakultami)**

**Názov univerzity/vysokej školy a fakulty:** Fakulta matematiky, fyziky a informatiky UK  
**Druh spolupráce (spoločné pracovisko alebo iné):** spolupráca na riešení projektu APVV-14-0017  
**Začiatok spolupráce:** 2015  
**Zameranie:** svetlotechnika  
**Zhodnotenie:** spoločný projekt

**Názov univerzity/vysokej školy a fakulty:** Fakulta chemickej a potravinárskej technológie STU  
**Druh spolupráce (spoločné pracovisko alebo iné):** spoločný projekt, spolupráca v pedagogickej činnosti  
**Začiatok spolupráce:** 1995  
**Zameranie:** chémia, technológia materiálov, penobetóny  
**Zhodnotenie:** zlepšenie pedagogického procesu

**Názov univerzity/vysokej školy a fakulty:** Stavebná fakulta STU  
**Druh spolupráce (spoločné pracovisko alebo iné):** spolupráca v skúšobníctve, členstvo v Odborovej komisii TKIS  
**Začiatok spolupráce:** 1996  
**Zameranie:** svetlotechnika, betónové konštrukcie a mosty  
**Zhodnotenie:** spolupráca podľa harmonogramu na veľmi dobrej úrovni, spolupráca v experimentálnej oblasti

**Názov univerzity/vysokej školy a fakulty:** Stavebná fakulta TUKE  
**Druh spolupráce (spoločné pracovisko alebo iné):** spoločný projekt VEGA-0042-17  
**Začiatok spolupráce:** 2010  
**Zameranie:** stavebná fyzika  
**Zhodnotenie:** riešenie projektu, vedecká výchova; spolupráca podľa harmonogramu.

**Názov univerzity/vysokej školy a fakulty:** Stavebná fakulta ŽU  
**Druh spolupráce (spoločné pracovisko alebo iné):** spolupráca na riešení projektu VEGA 2/0033/15  
**Začiatok spolupráce:** 1996  
**Zameranie:** betónové konštrukcie a mosty, stavebná mechanika  
**Zhodnotenie:** spoločný projekt, posudková činnosť, členstvo v Odborovej komisii TKIS

**Názov univerzity/vysokej školy a fakulty:** Universitat Autònoma de Barcelona, Spain  
**Druh spolupráce (spoločné pracovisko alebo iné):** spoluorganizovanie konferencie LPTMM2017  
**Začiatok spolupráce:** 2017  
**Zameranie:** rozptyl svetla  
**Zhodnotenie:** pripravuje sa konferenčné číslo časopisu JQSRT

**Názov univerzity/vysokej školy a fakulty:** Fakulta chemická, Vysoké učení technické v Brně, VUT Brno, Česko  
**Druh spolupráce (spoločné pracovisko alebo iné):** spolupráca v pedagogickej činnosti, vo vedení doktorandov a postdoktorandov  
**Začiatok spolupráce:** 2008  
**Zameranie:** chémia a vlastnosti materiálov



**Zhodnotenie:** zlepšenie pedagogického procesu

**Názov univerzity/vysokej školy a fakulty:** University of Vienna, Rakúsko

**Druh spolupráce (spoločné pracovisko alebo iné):** spolupráca na meraní svetelného znečistenia

**Začiatok spolupráce:** 2017

**Zameranie:** svetelné znečistenie

**Zhodnotenie:** príprava experimentu v okolí Salzburgu

**Názov univerzity/vysokej školy a fakulty:** University Cégep de Sherbrooke, Kanada

**Druh spolupráce (spoločné pracovisko alebo iné):** spoluorganizovanie konferencie LPTMM2017

**Začiatok spolupráce:** 2015

**Zameranie:** rozptyl svetla

**Zhodnotenie:** zintenzívnenie spolupráce

**Názov univerzity/vysokej školy a fakulty:** US Army Research Lab, USA

**Druh spolupráce (spoločné pracovisko alebo iné):** príprava projektu ERC-2017-ADG (Proposal ID: 787676)

**Začiatok spolupráce:** 2014

**Zameranie:** rozptyl žiarenia na nabitých časticách

**Zhodnotenie:** spolupráca a príprava projektu

**Názov univerzity/vysokej školy a fakulty:** Institut Fresnel, Francúzsko

**Druh spolupráce (spoločné pracovisko alebo iné):** príprava projektu ERC-2017-ADG (Proposal ID: 787676)

**Začiatok spolupráce:** 2017

**Zameranie:** rozptyl žiarenia na nabitých časticách

**Zhodnotenie:** príprava projektu

**Názov univerzity/vysokej školy a fakulty:** Catedras CONACYT, Mexiko

**Druh spolupráce (spoločné pracovisko alebo iné):** spolupráca na projekte

**Začiatok spolupráce:** 2017

**Zameranie:** svetelné znečistenie

**Zhodnotenie:** spolupráca na projekte SkyMeAPP

**Názov univerzity/vysokej školy a fakulty:** City University of Hong Kong, Čína

**Druh spolupráce (spoločné pracovisko alebo iné):** spolupráca na modelovaní svetlovodov

**Začiatok spolupráce:** 2017

**Zameranie:** svetlovody, osvetľovanie interiérov

**Zhodnotenie:** zaslaná spoločná publikácia

**Názov univerzity/vysokej školy a fakulty:** Brno University of Technology, Česko

**Druh spolupráce (spoločné pracovisko alebo iné):** spolupráca na modelovaní svetlovodov

**Začiatok spolupráce:** 2017

**Zameranie:** svetlovody, osvetľovanie interiérov

**Zhodnotenie:** zaslaná spoločná publikácia

## **6.2. Významné aplikácie výsledkov výskumu v spoločenskej praxi alebo vyriešenie problému pre štátnu alebo neziskovú inštitúciu**

**Zadávateľ, odberateľ, zmluvný partner:** Pacific Northwest National Laboratory, USA

**Názov aplikácie/objekt výskumu:** An Investigation of LED Street Lighting's Impact on Sky Glow, (Solid-State Lighting Program, Building Technologies Office, Office of Energy Efficiency and

Renewable Energy, U.S. Department of Energy)

**Začiatok spolupráce:** 2017

**Stručný opis aplikácie/výsledku:** Cieľom spolupráce bolo analyzovať a predpovedať dopady LED technológií na jas nočnej oblohy. Aj keď sú LED svietidlá úsporné, vo všeobecnosti spôsobujú nárast difúzneho svetla oblohy. Ukázalo sa, že na dosiahnutie požadovanej úrovne osvetlenia postačovalo menej Wattov, čím sa výrazne eliminovali potenciálne dopady nárastu svetla nočnej oblohy až do tej miery, že predpovedaná difúzna osvetlenosť v kontrolných bodoch klesla.

**Zhodnotenie (uviesť i finančný efekt z aplikácie v € pre organizáciu SAV):** Vznikla intenzívna spolupráca s Dark Sky Association ("John Barentine" <[john@darksky.org](mailto:john@darksky.org)>) a city of Tucson (Jessie.Sanders@tucsonaz.gov), s ktorými momentálne pracujeme na zhodnotení dopadov LED konverzie na city of Tucson (USA).

### **6.3. Iná činnosť využiteľná pre potreby spoločenskej praxe**

## **7. Spolupráca s aplikačnou a hospodárskou sférou okrem aktivít uvedených v kap. 2, 3, 4**

### **7.1. Spoločné pracoviská s aplikačnou sférou**

### **7.2. Kontraktový – zmluvný výskum (vrátane zahraničných kontraktov)**

Názov kontraktu: Vyhodnotenie pórovej štruktúry betónov pre overenie ich fyzického stavu ako dôležitého poznatku pre stavebnú prax    Začiatok spolupráce: 17.02.2017-12.12.2017

Partner(i): TSÚS, n. o., Bratislava

Začiatok spolupráce (v súlade s podpísaným kontraktom): 2017

Ukončenie spolupráce (ak ide o spoluprácu v krátkom období): 2017

Objem získaných prostriedkov v bežnom roku (€): 4000

Stručný opis výstupu/výsledku: Stanovenie parametrov pórovej štruktúry (celková pórovitosť, priemerná veľkosť pórov, medián, priepustnosť, distribúcia veľkosti pórov apod.) rozličných vzoriek betónu alebo cementových mált.

Zhodnotenie: Výsledok poskytol podklad pre diagnostiku a hodnotenie stavu betónových konštrukcií.

### **7.3. Iná činnosť využiteľná pre potreby hospodárskej praxe**

Materiál ako podklad pre Ministerstvo hospodárstva, ktoré mapuje výskum SAV využiteľný v terajšej aj budúcej hospodárskej praxi SR. Téma 1: Svetelné znečistenie; Téma 2: Solárna energia. Informácia o významných projektoch v oblasti výskumu v energetických technológiach, vývoja a inovácií v ostatných 3 rokoch pre MSVvaS SR. Ponuka pre aplikačnú sféru: Dopadová štúdia modernizácie/rekonštrukcie verejného osvetlenia (VO) na úroveň rušivého svetla. Bola prejednaná a schválená predsedníctvom SAV a momentálne je v procese (kontaktná osoba p. Draxler).

## 8. Aktivity pre Národnú radu SR, vládu SR, ústredné orgány štátnej správy SR a iné organizácie

### 8.1. Členstvo v poradných zboroch vlády SR, Národnej rady SR, ministerstiev SR, orgánoch EÚ, EP, NATO a pod.

Tabuľka 8a Členstvo v poradných zboroch Národnej rady SR, vlády SR, ministerstiev SR, orgánoch EÚ, EP, NATO a pod.

| Meno pracovníka                           | Názov orgánu   | Funkcia     |
|---|--|-------------|
| Ing. Peter Matiašovský, CSc.              | Pracovná skupina Akreditačnej komisie Vlády SR pre oblasť výskumu 5: Projektovanie, inžinierstvo, technológie a vodné hospodárstvo | člen        |
| prof. Dr. Ing. arch. Henrieta Moravčíková | Rada garantov Centrálného registra evidencie umeleckej činnosti vysokých škôl, MŠ SR   | členka rady |

### 8.2. Expertízna činnosť a iné služby pre štátnu správu a samosprávy

**Názov expertízy:** TK 108 Svetlo a osvetlenie

**Adresát expertízy:** Úrad pre normalizáciu, metrológiu a skúšobníctvo SR

**Spracoval:** Ing. Stanislav Darula, CSc.

**Stručný opis:** člen komisie, normalizačná technická činnosť

**Názov expertízy:** Odborno legislatívna pracovná skupina

**Adresát expertízy:** Ministerstvo dopravy a spojov SR

**Spracoval:** Ing. Stanislav Darula, CSc.

**Stručný opis:** Expertízna činnosť k návrhu zákona o územnom plánovaní a zákona o výstavbe

**Názov expertízy:** Vyjadrenie k návrhu na vyhlásenie objektov za národnú kultúrnu pamiatku

**Adresát expertízy:** Pamiatkový úrad SR

**Spracoval:** PhDr. Katarína Haberlandová, PhD.

**Stručný opis:** Odborné vyjadrenie k návrhu na vyhlásenie bytových domov na ul. J. Matušku č. 1,3,5,7 – Moyzesova 4,5,8,10 za národnú kultúrnu pamiatku.

**Názov expertízy:** Spolupráca pri príprave emisie striebornej zberateľskej mince

**Adresát expertízy:** Národná banka Slovenska

**Spracoval:** PhDr. Katarína Haberlandová, PhD.

**Stručný opis:** Odborná spolupráca pri príprave emisie striebornej zberateľskej mince k 150. výročiu narodenia Dušana Jurkoviča.

**Názov expertízy:** Člen TK 5 - Betónové konštrukcie pri ÚNMS

**Adresát expertízy:** Úrad pre normalizáciu, metrológiu a skúšobníctvo SR

**Spracoval:** Ing. Martin Križma, PhD.

**Stručný opis:** Poradenská a normalizačná činnosť

**Názov expertízy:** Členstvo v komisii TK5/SK1 - Navrhovanie

**Adresát expertízy:** Úrad pre normalizáciu, metrológiu a skúšobníctvo SR

**Spracoval:** Ing. Martin Križma, PhD.

**Stručný opis:** Poradenská a normalizačná činnosť

**Názov expertízy:** Predsedníctvo TK 5/SK3 - Pórobetón

**Adresát expertízy:** Úrad pre normalizáciu, metrológiu a skúšobníctvo SR

**Spracoval:** Ing. Martin Križma, PhD.

**Stručný opis:** Poradenská a normalizačná činnosť

**Názov expertízy:** Spolupráca pri príprave emisie známky

**Adresát expertízy:** Národná banka Slovenska

**Spracoval:** prof. Dr. Ing. arch. Henrieta Moravčíková

**Stručný opis:** Odborná spolupráca pri príprave emisie známky s motívom Mostu SNP v Bratislave.

### 8.3. Členstvo v radách štátnych programov a podprogramov ŠPVV a ŠO

Tabuľka 8b Členstvo v radách štátnych programov a podprogramov ŠPVV a ŠO

| Meno pracovníka | Názov orgánu | Funkcia |
|-----------------|--------------|---------|
|-----------------|--------------|---------|

### 8.4. Prehľad aktuálnych spoločenských problémov, ktoré riešilo pracovisko v spolupráci s Kanceláriou prezidenta SR, s vládnyimi a parlamentnými orgánmi alebo pre ich potrebu

## 9. Vedecko-organizačné a popularizačné aktivity

### 9.1. Vedecko-popularizačná činnosť

Tabuľka 9a Súhrnné počty vedecko-popularizačných činností organizácie SAV

| Typ              | Počet | Typ                  | Počet | Typ                | Počet |
|------------------|-------|----------------------|-------|--------------------|-------|
| prednášky/besedy | 18    | tlač                 | 3     | TV                 | 0     |
| rozhlas          | 1     | internet             | 0     | exkurzie           | 3     |
| publikácie       | 0     | multimediálne nosiče | 0     | dokumentárne filmy | 0     |
| iné              | 1     |                      |       |                    |       |

### 9.2. Vedecko-organizačná činnosť

Tabuľka 9b Vedecko-organizačná činnosť

| Názov podujatia  | Domáca/<br>medzinárodná | Miesto                                  | Dátum konania     | Počet<br>účastníkov |
|--|-------------------------|---|-------------------|---------------------|
| Svetelné znečistenie:<br>Teória, modelovanie a<br>meranie 2017 | medzinárodná            | hotel Terradets,<br>Cellers, Španielsko | 27.06.-30.06.2017 | 65                  |
| Neplánované / plánované<br>mestá                               | medzinárodná            | Bratislava                              | 08.11.-08.11.2017 | 50                  |

### 9.3. Účasť na výstavách

Názov výstavy: Prvé dámy slovenskej architektúry

Miesto konania: Bratislava

Dátum: 29.5.2017

Zhodnotenie účasti: Výstava v rámci podujatia DAAD 2017 Bratislava; Kurátorka výstavy:

Henrieta Moravčíková; výtvarné riešenie: Laura Pastoreková, M. Zaiček. od 29. 5. do 4. 6. 2017

### 9.4. Účasť v programových a organizačných výboroch národných konferencií

Tabuľka 9c Programové a organizačné výbory národných konferencií

| Meno pracovníka | Programový | Organizačný | Programový i organizačný |
|-----------------|------------|-------------|--------------------------|
| <b>Spolu</b>    |            |             |                          |

### 9.5. Členstvo v redakčných radách časopisov

Ing. Stanislav Darula, CSc.

Light and Engineering (funkcia: člen redakčnej rady)

Lighting Research and Technology (funkcia: člen redakčnej rady)

VTs News (funkcia: člen redakčnej rady)

Mgr. Miroslav Kocifaj, PhD.

Building Research Journal (funkcia: Editor in Chief)

Journal of Quantitative Spectroscopy & Radiative Transfer (funkcia: Guest Editor)

Ing. Peter Matiašovský, CSc.

Building Research Journal (funkcia: predseda redakčnej rady)

Encyclopaedia Beliana (funkcia: člen redakčnej rady )

Journal of Building Physics (funkcia: člen)

prof. Dr. Ing. arch. Henrieta Moravčíková

ALFA (STU) (funkcia: predsedkyňa redakčnej rady)

Architektúra & Urbanizmus (funkcia: členka a editorka)

Studies in History & Theory of Architecture (Universita Ion Mincu, Bukurešť) (funkcia: členka redakčnej rady)

Prof. Ing. Ján Sládek, DrSc.

CMES-Computer Modeling in Engineering & Sciences (funkcia: editor {Corresponding editor})

Electronic Jour. Boundary Elements (funkcia: člen)

Jour. Computational and Applied Mechanics (funkcia: člen)

Journal of Multiscale Modelling (funkcia: člen)

SDHM-Structural Durability and Health Monitoring Journal (funkcia: člen)

Strojnícky časopis (funkcia: člen)

Prof. RNDr. Vladimír Sládek, DrSc.

Communications in Numerical Analysis (funkcia: člen redakčnej rady)

Int. Jour. Engineering Analysis with Boundary Elements (funkcia: Editor)

Journal of Industrial Mathematics and Computational Mechanics (funkcia: člen redakčnej rady)

Newsletter of the Int. Soc. of Boundary Element Methods (funkcia: člen redakčnej rady)

Series Advances in Boundary Elements (funkcia: člen edičnej rady)

Mgr. Peter Szalay, PhD.

A10 (Holandsko) (funkcia: člen redakčnej rady)

ERA 21 (funkcia: člen redakčnej rady)

## **9.6. Činnosť v domácich vedeckých spoločnostiach**

Ing. Stanislav Darula, CSc.

SBkS - Slovenská bioklimatologická spoločnosť pri SAV (funkcia: člen)

SNK CIE (funkcia: člen predsedníctva, vedecký tajomník)

SSTP - Slovenská spoločnosť pre techniku prostredia (funkcia: člen)

SSTS-Slovenská svetelnotechnická spoločnosť (funkcia: člen predsedníctva)

ZSVTS (funkcia: člen Rady)

Mgr. Miroslav Kocifaj, PhD.

CIE Div5, TC 5-28 (funkcia: člen)

Slovenská astronomická spoločnosť (funkcia: člen)

RNDr. Ladislav Kómar, PhD.

SSTS - Slovenská svetelnotechnická spoločnosť (funkcia: člen)

prom. fyz. Oľga Koronthályová, CSc.

SFS Slovenská fyzikálna spoločnosť (funkcia: člen)

SSTP Slovenská spoločnosť pre techniku prostredia (funkcia: člen)

Ing. Martin Križma, PhD.

Slovenský komitét fib (funkcia: člen)

Ing. Peter Matiašovský, CSc.

Slovenská bioklimatologická spoločnosť pri SAV (funkcia: člen)

Slovenská fyzikálna spoločnosť pri SAV (funkcia: člen)

Slovenská spoločnosť pre techniku prostredia (funkcia: člen)

Zväz slovenských vedeckotechnických spoločností (funkcia: Auditor EUR-ACE akreditačného centra ZSVTS)

prof. Dr. Ing. arch. Henrieta Moravčíková

DOCOMOMO Slovensko (funkcia: predsedkyňa)

Prof.Dr.Ing. Martin-Tchingnabé Palou

CO-SM Qualiform s.r.o. (funkcia: člen)

Ing. Ladislav Sátor, PhD.

Slovenská spoločnosť pre mechaniku (funkcia: člen)

Prof. Ing. Ján Sládek, DrSc.

Slovenska spoločnosť pre mechaniku (funkcia: člen)

Prof. RNDr. Vladimír Sládek, DrSc.

Slovenská spoločnosť pre mechaniku (funkcia: člen hlav. výboru)

Mgr. Peter Szalay, PhD.

DOCOMOMO Slovakia (funkcia: člen)

Rada udržateľnosti národnej kultúrnej pamiatky SPU v Nitre (funkcia: člen odbornej rady)

**9.7. Iné dôležité informácie o vedecko-organizačných a popularizačných aktivitách**



## 10. Činnosť knižnično-informačného pracoviska

### 10.1. Knižničný fond

Tabuľka 10a Knižničný fond

|  |   |       |
|--|---|-------|
| <b>Knižničné jednotky spolu</b>              |   | 90070 |
| z toho                                       | knihy a zviazané periodiká                            | 79886 |
|  | audiovizuálne dokumenty                               |       |
|  | elektronické dokumenty (vrátane digitálnych)          |       |
|  | mikroformy  |       |
|  | iné špeciálne dokumenty - dizertácie, výskumné správy | 10184 |
|  | Rukopisy, vzácne tlače                                |       |
| Počet titulov dochádzajúcich periodík        |   | 7     |
| z toho zahraničné periodiká                  |   | 3     |
| Ročný prírastok knižničných jednotiek        |   | 5     |
| v tom  | kúpou   | 5     |
|  | darom   |       |
|  | výmenou   |       |
|  | bezodplatným prevodom                                 |       |
|  | náhradou  |       |
| Úbytky knižničných jednotiek                 |   |       |
| Knižničné jednotky spracované automatizovane |   |       |

Výraz „**v tom**“ označuje úplné (vyčerpávajúce) údaje, ktorých súčet sa musí rovnať údaju v riadku „spolu“, čiže nadradenému riadku.

Výraz „**z toho**“ označuje neúplné (výberové) údaje, ktorých súčet sa nemusí rovnať údaju v riadku „spolu“.

### 10.2. Výpožičky a služby

Tabuľka 10b Výpožičky a služby

|                                   |                                  |     |
|-----------------------------------|----------------------------------|-----|
| <b>Výpožičky spolu (riadok 1)</b> |                                  | 294 |
| v tom z<br>r. 1                   | prezenčné výpožičky              | 25  |
|                                   | absenčné výpožičky               | 95  |
| v tom z<br>r. 1                   | odborná literatúra pre dospelých | 120 |
|                                   | výpožičky periodík               | 40  |
| MVS iným knižniciam               |                                  | 1   |
| MVS z iných knižníc               |                                  | 10  |
| MMVS iným knižniciam              |                                  |     |
| MMVS z iných knižníc              |                                  | 3   |
| Počet vypracovaných bibliografií  |                                  |     |

|                             |  |
|-----------------------------|--|
| Počet vypracovaných rešerší |  |
|-----------------------------|--|

### 10.3. Používatelia

Tabuľka 10c Používatelia

|  |    |
|--|----|
| Registrovaní používatelia                              | 45 |
| Návštevníci knižnice spolu (bez návštevníkov podujatí) | 60 |

### 10.4. Iné údaje

Tabuľka 10d Iné údaje

|   |     |
|---|-----|
| On-line katalóg knižnice na internete ( 1=áno, 0=nie) | 0   |
| Náklady na nákup knižničného fondu v €                | 554 |

### 10.5. Iné informácie o knižničnej činnosti

## **11. Aktivity v orgánoch SAV**

### **11.1. Členstvo vo Výbore Snemu SAV**

### **11.2. Členstvo v Predsedníctve SAV a vo Vedeckej rade SAV**

### **11.3. Členstvo vo vedeckých kolégiách SAV**

Ing. Peter Matiašovský, CSc.

- VK SAV pre elektroniku, materiálový výskum a technológie (člen)

### **11.4. Členstvo v komisiách SAV**

prof. Dr. Ing. arch. Henrieta Moravčíková

- Komisia SAV pre medzinárodnú vedecko-technickú spoluprácu (členka)

Prof. Ing. Ján Sládek, DrSc.

- Komisia SAV pre posudzovanie vedeckej kvalifikácie zamestnancov (člen)

### **11.5. Členstvo v orgánoch VEGA**

Mgr. Miroslav Kocifaj, PhD.

- komisia č. 6 pre stavebné inžinierstvo (stavebníctvo, dopravu a geodéziu) a environmentálne inžinierstvo vrátane baníctva, hutníctva a vodohospodárskych vied (člen)

Ing. Peter Matiašovský, CSc.

- Komisia VEGA pre stavebné inžinierstvo (stavebníctvo, dopravu a geodéziu) a environmentálne inžinierstvo vrátane baníctva, hutníctva a vodohospodárskych vied (člen)

Prof.Dr.Ing. Martin-Tchingnabé Palou

- Komisia VEGA pre stavebné inžinierstvo (stavebníctvo, dopravu a geodéziu) a environmentálne inžinierstvo vrátane baníctva, hutníctva a vodohospodárskych vied (Predseda komisie)

Prof. RNDr. Vladimír Sládek, DrSc.

- komisia č.6 pre stavebné inžinierstvo (stavebníctvo, dopravu a geodéziu) a environmentálne inžinierstvo vrátane baníctva a vodohospodárskych vied (člen)

## 12. Hospodárenie organizácie

### 12.1. Výdavky PO SAV

Tabuľka 12a Výdavky PO SAV (v €)

| V ý d a v k y                             | Skutočnosť<br>k 31.12.2017<br>spolu | v tom:                       |                        |                    |                  |
|---|-------------------------------------|------------------------------|------------------------|--------------------|------------------|
|   |                                     | zo ŠR od<br>zriaďovateľ<br>a | z vlastných<br>zdrojov | z iných<br>zdrojov | z toho:<br>ŠF EÚ |
| <b>Výdavky spolu</b>                      | 1 322 067                           | 827 021                      | 235 207                | 259 839            |                  |
| <b>Bežné výdavky</b>                      | 1 314 468                           | 824 941                      | 229 688                | 259 839            |                  |
| <b>v tom:</b>                             |                                     |                              |                        |                    |                  |
| mzdy (610)                                | 764 409                             | 649 575                      | 2 708                  | 112 126            |                  |
| poistné a príspevok do<br>poistovní (620) | 255 459                             | 86 295                       | 122 766                | 46 398             |                  |
| tovary a služby (630)                     | 258 369                             | 86 801                       | 97 281                 | 74 287             |                  |
| z toho: časopisy                          | 5 733                               | 3 477                        | 2 256                  |                    |                  |
| VEGA projekty                             | 51 268                              | 51 268                       |                        |                    |                  |
| MVTS projekty                             | 26 170                              | 26 170                       |                        |                    |                  |
| CE  |                                     |                              |                        |                    |                  |
| vedecká výchova                           | 160                                 | 160                          |                        |                    |                  |
| bežné transfery (640)                     | 36 231                              | 2 270                        | 6 933                  | 27 028             |                  |
| z toho: štipendiá                         | 2 270                               | 2 270                        |                        |                    |                  |
| transfery partnerom<br>projektov          | 24 676                              |                              |                        | 24 676             |                  |
| <b>Kapitálové výdavky</b>                 | 7 599                               | 2 080                        | 5 519                  |                    |                  |
| <b>v tom:</b>                             |                                     |                              |                        |                    |                  |
| obstarávanie kapitálových<br>aktív        | 7 599                               | 2 080                        | 5 519                  |                    |                  |
| kapitálové transfery                      |                                     |                              |                        |                    |                  |
| z toho: transfery<br>partnerom projektov  |                                     |                              |                        |                    |                  |

**12.2. Príjmy PO SAV**

Tabuľka 12b Príjmy PO SAV (v €)

| <b>P r í j m y</b>                              | <b>Skutočnosť<br/>k 31.12.2017<br/>spolu</b> | <b>v tom:</b>     |                                     |
|---|--|-------------------|-------------------------------------|
|   |  | <b>rozpočtové</b> | <b>z<br/>mimoroz<br/>p. zdrojov</b> |
| <b>Príjmy spolu</b>                             | 1 254 297                                    | 827 021           | 427 276                             |
| <b>Nedaňové príjmy</b>                          | 166 383                                      | 166 383           |                                     |
| <b>v tom:</b>                                   |  |                   |                                     |
| príjmy z prenájmu                               | 147 148                                      | 147 148           |                                     |
| príjmy z predaja<br>výrobkov a služieb          | 15 953                                       | 15 953            |                                     |
| iné   | 3 282  | 3 282             |                                     |
| <b>Granty a transfery<br/>(mimo zdroja 111)</b> | 427 276                                      | 166 383           | 260 893                             |
| <b>v tom:</b>                                   |  |                   |                                     |
| <b>tuzemské</b>                                 | 427 276                                      | 166 383           | 260 893                             |
| <b>z toho: APVV</b>                             | 258 500                                      |                   | 258 500                             |
| <b>iné</b>                                      | 168 776                                      | 166 383           | 2 393                               |
| zahraničné                                      |  |                   |                                     |
| z toho: projekty<br>rámcového programu EÚ       |  |                   |                                     |
| iné   |  |                   |                                     |

### **13. Nadácie a fondy pri organizácii SAV**

## **14. Iné významné činnosti organizácie SAV**

## **15. Vyznamenania, ocenenia a ceny udelené pracovníkom organizácie v roku 2017**

### **15.1. Domáce ocenenia**

#### **15.1.1. Ocenenia SAV**

#### **15.1.2. Iné domáce ocenenia**

##### **Darula Stanislav**

Bronzová pamätná plaketa SvF TU v Košiciach

*Oceňovateľ: Stavebná fakulta TU v Košiciach*

*Opis: Za vedecký prínos v rozvoji stavebníctva a spolupráce s SvF TU v Košiciach*

##### **Haberlandová Katarína**

Prémia za vedeckú a odbornú literatúru za rok 2016

*Oceňovateľ: Literárny fond*

*Opis: Prémia za vedeckú a odbornú literatúru za rok 2016, v kategórii prírodné a technické vedy, za dielo Industriál očami odborníkov/pamätníkov.*

### **15.2. Medzinárodné ocenenia**



**16. Poskytovanie informácií v súlade so zákonom č. 211/2000 Z. z. o slobodnom prístupe k informáciám v znení neskorších predpisov (Zákon o slobode informácií)**

## **17. Problémy a podnety pre činnosť SAV**

**Správu o činnosti organizácie SAV spracoval(i):**

Ing. Jozef Kriváček, CSc., 02/ 5930 9215

**Riaditeľ organizácie SAV**

**Predseda vedeckej rady**

.....  
Ing. Peter Matiašovský, CSc.

.....  
Mgr. Miroslav Kocifaj, PhD.

**Prílohy****Príloha A****Zoznam zamestnancov a doktorandov organizácie k 31.12.2017****Zoznam zamestnancov podľa štruktúry (nadväzne na údaje v Tabuľke 1a)**

|  | <b>Meno s titulmi</b>                     | <b>Úväzok<br/>(v %)</b> | <b>Ročný prepočítaný<br/>úväzok</b> |
|--|---|-------------------------|-------------------------------------|
| <b>Vedúci vedeckí pracovníci DrSc.</b>                                     |   |                         |                                     |
| 1.   | Prof. Ing. Ján Sládek, DrSc.              | 100                     | 1.00                                |
| 2.   | Prof. RNDr. Vladimír Sládek, DrSc.        | 100                     | 1.00                                |
| <b>Samostatní vedeckí pracovníci</b>                                       |   |                         |                                     |
| 1.   | Ing. Stanislav Darula, CSc.               | 100                     | 1.00                                |
| 2.   | Mgr. Milan Držík, CSc.                    | 30                      | 0.03                                |
| 3.   | Mgr. Miroslav Kocifaj, PhD.               | 100                     | 1.00                                |
| 4.   | prom. fyz. Oľga Koronthályová, CSc.       | 60                      | 0.63                                |
| 5.   | Ing. Martin Križma, PhD.                  | 100                     | 1.00                                |
| 6.   | Ing. Peter Matiašovský, CSc.              | 100                     | 1.00                                |
| 7.   | prof. Dr. Ing. arch. Henrieta Moravčíková | 100                     | 1.00                                |
| 8.   | Prof.Dr.Ing. Martin-Tchingnabé Palou      | 100                     | 1.00                                |
| <b>Vedeckí pracovníci</b>  |   |                         |                                     |
| 1.   | PhDr. Katarína Haberlandová, PhD.         | 100                     | 1.00                                |
| 2.   | Mgr. Matúš Holúbek, PhD.                  | 100                     | 1.00                                |
| 3.   | RNDr. Ladislav Kómar, PhD.                | 100                     | 1.00                                |
| 4.   | Ing. Jozef Kriváček, CSc.                 | 100                     | 1.00                                |
| 5.   | Ing. Eva Kuzielová, PhD.                  | 100                     | 1.00                                |
| 6.   | Ing. Ján Malík, CSc.                      | 40                      | 0.40                                |
| 7.   | Ing. Peter Mihálka, PhD.,                 | 50                      | 0.32                                |
| 8.   | Mgr. Gabriela Orešková, PhD.              | 100                     | 1.00                                |
| 9.   | Ing. arch. Laura Pastoreková, PhD.        | 100                     | 1.00                                |
| 10.  | Mgr. Jaromír Petržala, PhD.               | 100                     | 1.00                                |
| 11.  | Ing. Miroslav Repka, PhD.                 | 100                     | 1.00                                |
| 12.  | Ing. Ladislav Sátor, PhD.                 | 100                     | 1.00                                |
| 13.  | Mgr. Peter Szalay, PhD.                   | 100                     | 1.00                                |
| <b>Odborní pracovníci s VŠ vzdelaním (výskumní a vývojoví zamestnanci)</b> |   |                         |                                     |
| 1.   | Ing. Janette Dragomirová                  | 30                      | 0.03                                |
| 2.   | Ing. Marta Kuliffayová                    | 100                     | 1.00                                |

|  |                        |     |      |
|--|------------------------|-----|------|
| 3.   | Ing. Marta Malíková    | 100 | 1.00 |
| 4.   | Ing. Marián Vrabec     | 100 | 1.00 |
| 5.   | Ing. Matúš Žemlička    | 50  | 0.50 |
| <b>Odborní pracovníci s VŠ vzdelaním (ostatní zamestnanci)</b> |                        |     |      |
| 1.   | Ing. Ján Dobiáš        | 30  | 0.03 |
| 2.   | RNDr. Anna Kocifajová  | 100 | 0.15 |
| 3.   | Mgr. Jana Matiašovská  | 33  | 0.33 |
| 4.   | Ing. Mária Považancová | 100 | 1.00 |
| 5.   | Ing. Danka Sitarčíková | 50  | 0.50 |
| <b>Odborní pracovníci ÚSV</b>                                  |                        |     |      |
| 1.   | Olga Adamcová          | 100 | 1.00 |
| 2.   | Viera Blahová          | 100 | 1.00 |
| 3.   | Sylvia Bučičová        | 100 | 1.00 |
| 4.   | Jozefa Gajarská        | 100 | 1.00 |
| 5.   | Martin Habovštiak      | 100 | 1.00 |
| 6.   | Anna Hrdá              | 100 | 1.00 |
| 7.   | Roman Kralovič         | 100 | 1.00 |
| 8.   | Mária Makovicová       | 100 | 1.00 |
| 9.   | Anna Rajnohová         | 100 | 1.00 |
| 10.  | Dagmar Slámová         | 100 | 1.00 |
| 11.  | Alexander Toth         | 100 | 1.00 |
| <b>Ostatní pracovníci</b>                                      |                        |     |      |
| 1.   | Zdenko Černý           | 100 | 1.00 |
| 2.   | Eva Janotová           | 100 | 1.00 |
| 3.   | Karol Kasák            | 100 | 1.00 |
| 4.   | Rudolf Maninka         | 100 | 1.00 |
| 5.   | Lucia Pinkavová        | 100 | 1.00 |

**Zoznam zamestnancov, ktorí odišli v priebehu roka**

|                                      | <b>Meno s titulmi</b>        | <b>Dátum odchodu</b> | <b>Ročný prepočítaný úväzok</b> |
|--------------------------------------|------------------------------|----------------------|---------------------------------|
| <b>Samostatní vedeckí pracovníci</b> |                              |                      |                                 |
| 1.                                   | Dr. Ing. Michael Wünsche     | 31.8.2017            | 0.67                            |
| <b>Vedeckí pracovníci</b>            |                              |                      |                                 |
| 1.                                   | Mgr. Matúš Holúbek, PhD.     | 31.12.2017           | 1.00                            |
| 2.                                   | Mgr. Gabriela Orešková, PhD. | 31.12.2017           | 1.00                            |

| <b>Odborní pracovníci s VŠ vzdelaním (ostatní zamestnanci)</b> |                       |            |      |
|--|-----------------------|------------|------|
| 1.   | Mgr. Jana Matiašovská | 31.12.2017 | 0.33 |
| <b>Odborní pracovníci ÚSV</b>                                  |                       |            |      |
| 1.   | Peter Bachratý        | 30.9.2017  | 0.75 |
| 2.   | Marta Galčáková       | 30.4.2017  | 0.33 |
| 3.   | Peter Platzner        | 27.1.2017  | 0.00 |

**Zoznam doktorandov**

|   | <b>Meno s titulmi</b>    | <b>Škola/fakulta</b> | <b>Študijný odbor</b> |
|---|--------------------------|----------------------|-----------------------|
| <b>Interní doktorandi hrazení z prostředků SAV</b>                      |                          |                      |                       |
| 1.  | Ing. Janette Dragomírová | Stavebná fakulta STU | 5.2.8 stavebníctvo    |
| <b>Interní doktorandi hrazení z iných zdrojov</b>                       |                          |                      |                       |
| <i>organizácia nemá interných doktorandov hrazených z iných zdrojov</i> |                          |                      |                       |
| <b>Externí doktorandi</b>   |                          |                      |                       |
| <i>organizácia nemá externých doktorandov</i>                           |                          |                      |                       |

**Zoznam zamestnancov prijatých do jedného roka od získania PhD.**

|  | <b>Meno s titulmi</b> | <b>Dátum obhajoby</b> | <b>Dátum prijatia</b> | <b>Úväzok (v %)</b> |
|--|-----------------------|-----------------------|-----------------------|---------------------|
|--|-----------------------|-----------------------|-----------------------|---------------------|

**Zoznam emeritných vedeckých zamestnancov**

|    | <b>Meno s titulmi</b>            |
|----|----------------------------------|
| 1. | Doc. Ing. Richard Kittler, DrSc. |
| 2. | Ing. Vladimír Živica, DrSc.      |

## Príloha B

### Projekty riešené v organizácii

#### Medzinárodné projekty

#### Programy: Medziakademická dohoda (MAD)

##### 1.) Originálne riešenie tepelnej regulácie BIPV modulov včlenením vrstiev MEPCM (*Novel thermal management design for BIPV modules incorporating MEPCM layers*)

|   |                                       |
|---|---------------------------------------|
| <b>Zodpovedný riešiteľ:</b>                   | Peter Matiašovský                     |
| <b>Trvanie projektu:</b>                      | 1.1.2016 / 31.12.2018                 |
| <b>Evidenčné číslo projektu:</b>              | SAS-MOST JRP 2015/7                   |
| <b>Organizácia je koordinátorom projektu:</b> | áno                                   |
| <b>Koordinátor:</b>                           | Ústav stavebníctva a architektúry SAV |
| <b>Počet spoluriešiteľských inštitúcií:</b>   | 2 - Taiwan: 2                         |
| <b>Čerpané financie:</b>                      | SAV: 22000 €                          |

##### Dosiahnuté výsledky:

Bola vypracovaná parametrická štúdia aplikovateľnosti konceptu tzv. ekvivalentnej slnečnej teploty pri predbežných analýzach okrajových podmienok a vplyvu dĺžky časového kroku na korektnosť výsledkov numerických simulácií tepelného správania systémov s integrovanou fotovoltikou a mikroencapsulovaným materiálom s fázovou zmenou (MEPCM). Ako okrajové podmienky bol použitý skutočný meteorologický rok 2015, predstavujúci najteplejší rok od začiatku meraní na meteorologickej stanici Bratislava – Koliba (od roku 1951). Zistilo sa, že ekvivalentná slnečná teplota ako komplexný parameter tepelnej záťaže umožňuje rýchle predbežné hodnotenie daného meteorologického roku z hľadiska kritických hodnôt, tepelných záťaží a medzidenných zmien v jednotlivých mesiacoch. Výsledky simulácií, pri rastúcom časovom kroku od 1 po 60 minút, ukázali, že vplyv časového kroku je pre výsledky simulácií významný a že použité časových krokov dlhších ako 1 minúta pri vývoji integrovaného obalového systému je chybné. Publikácia: MIHÁLKA, Peter - MATIAŠOVSKÝ, Peter. Design reference year for development of photovoltaic envelope systems. In AIP Conference Proceedings, 2017, vol. 1866, art. no. 040027. ISSN 0094-243X.

Porovnanie účinnosti distribúcie a akumulácie tepla v MEPCM module počas denného cyklu ukázalo, že šírenie tepla vysoko tepelne vodivou maticou je efektívnejšie, ako šírenie prirodzenou konvekciou v medzerách medzi MEPCM. Preto ďalší výskum bol zameraný na panely s uložením MEPCM vo vysoko tepelne vodivých štruktúrach, kedy MEPCM využíva celú svoju kapacitu. Bola uskutočnená experimentálna štúdia denného tepelného správania stenového panelu obsahujúceho MEPCM uložený v hliníkovej plástovej štruktúre. Vonkajší povrch konštrukcie bol vystavený dennému priebehu slnečného žiarenia a nočnej prirodzenej konvekcie, vnútorný povrch bol vystavený nútenej, alebo prirodzenej konvekcie. Výsledky potvrdzujú, že MEPCM v stene dokáže efektívne rozptýliť teplo a že MEPCM sa môže vždy obnoviť do pôvodných tepelných podmienok a byť pripravený pre použitie pri tepelnom manažmente v nasledujúcom dni. Publikácia: WANG, Shiuan-Man - MATIAŠOVSKÝ, Peter - MIHÁLKA, Peter - LAI, Chi-Ming. Experimental investigation of the daily thermal performance of a mPCM honeycomb wallboard. In Energy and Buildings, 2018, vol. 159, p.419-425. ISSN 0378-7788.

V stredoeurópskych a osobitne v taiwanských klimatických podmienkach je dôležité modelovanie difúznej zložky slnečného žiarenia. Celooblohové skenery vybavené vhodným spektorrádiometrom môžu významne pomôcť hodnotiť stav atmosféry vrátane dostupnosti slnečného svetla a difúzneho svetla na fasádach budov. Pre tento cieľ je vyvíjaný oblohový skener

vhodný pre okamžité monitorovanie stavu atmosféry pre získanie parametrov atmosférických aerosolov potrebných pre precízne fyzikálne predikcie dostupnosti svetla. Skener môže pracovať v dvoch rôznych režimoch, s niekoľkými modifikáciami pre denné alebo nočné merania. Rukopis: A portable sky scanner for measuring extremely low night-sky brightness; Autori: Miroslav KOCIFAJ, Ladislav KÓMAR, and František Kunderlik; Journal of Quantitative Spectroscopy & Radiative Transfer - v tlači.

## **Programy: UNESCO**

### **2.) SkyMe APP (*SkyMeAPP*)**

|   |  |
|---|--|
| <b>Zodpovedný riešiteľ:</b>                   | Miroslav Kocifaj   |
| <b>Trvanie projektu:</b>                      | 8.11.2017 /  |
| <b>Evidenčné číslo projektu:</b>              |  |
| <b>Organizácia je koordinátorom projektu:</b> | nie  |
| <b>Koordinátor:</b>                           | CENTROMET Consortium, National Council of Science and Technology |
| <b>Počet spoluriešiteľských inštitúcií:</b>   | 5 - Španielsko: 1, Mexiko: 2, Slovensko: 2                       |
| <b>Čerpané financie:</b>                      | -  |

Dosiahnuté výsledky:

## **Programy: IAEA**

### **3.) Stavebné integrované solárne systémy obodových plášťov pre HVAC a osvetlenie** (*Building Integrated Solar Envelope Systems for HVAC and Lighting*)

|   |   |
|---|---|
| <b>Zodpovedný riešiteľ:</b>                   | Stanislav Darula  |
| <b>Trvanie projektu:</b>                      | 1.2.2016 / 1.3.2017   |
| <b>Evidenčné číslo projektu:</b>              | IEA SHC Task 56   |
| <b>Organizácia je koordinátorom projektu:</b> | nie   |
| <b>Koordinátor:</b>                           | Institute for Renewable Energy, The European Academy of Bozen |
| <b>Počet spoluriešiteľských inštitúcií:</b>   | 0   |
| <b>Čerpané financie:</b>                      | -   |

Dosiahnuté výsledky:

## **Programy: Iné**

### **4.) Program metropolitných štúdií (*Programa en Estudios Metropolitanos (Metropolitan Studies Programme)*)**

|                                  |                  |
|----------------------------------|------------------|
| <b>Zodpovedný riešiteľ:</b>      | Miroslav Kocifaj |
| <b>Trvanie projektu:</b>         | 1.9.2014 /       |
| <b>Evidenčné číslo projektu:</b> | 2723 CONACYT     |
| <b>Organizácia je</b>            | nie              |



**koordinátorom projektu:**

**Koordinátor:** Cátedras CONACYT

**Počet spoluriešiteľských** 0

**inštitúcií:**

**Čerpané financie:** -

Dosiahnuté výsledky:

**Projekty národných agentúr**

**Programy: VEGA**

**1.) Energetické vplyvy slnečného žiarenia a integrovaných obvodových konštrukcií na kvalitu prostredia v budovách a mestách** (*Research of solar energy influences and integrated envelopes on the quality of the environment in buildings and cities*)

**Zodpovedný riešiteľ:** Stanislav Darula

**Trvanie projektu:** 1.1.2017 / 1.1.2019

**Evidenčné číslo projektu:** 2/0042/17

**Organizácia je** áno

**koordinátorom projektu:**

**Koordinátor:** Ústav stavebníctva a architektúry SAV

**Počet spoluriešiteľských** 0

**inštitúcií:**

**Čerpané financie:** VEGA SAV: 4191 €

Dosiahnuté výsledky:

DARULA, Stanislav - KITTLER, Richard. The new generation of an artificial sky: simulating various overcast sky conditions. In Lux Europa 2017 : proceedings of the european lighting conference, september 18-20, 2017, Ljubljana. - Ljubljana : Lighting Engineering Society of Slovenia, 2017, p. 401-405. ISBN 978-961-93733-4-7.

DARULA, Stanislav - MALÍKOVÁ, Marta. Sunlight exposure: minimum solar altitude. Preslnenie: minimálna výška Slnka. In LIGHT - SVETLO 2017 : proceedings of the 22nd international conference. - Bratislava : Slovenská svetlotechnická spoločnosť, 2017, p. 13-18. ISBN 978-80-972865-0-7.

FERENČÍKOVÁ, Mária - DARULA, Stanislav. Availability of daylighting in school operating time. In Light and Engineering, 2017, vol. 25, no. 2, p. 71-78. (0.118 - IF2016). ISSN 0236-2945.

**2.) Optické vlastnosti zalomených svetlovodov za podmienok nehomogénnej oblačnosti s Ťubovol'ným pokrytím oblohy** (*Effectiveness of bended light guides under arbitrary sky conditions including broken cloud arrays*)

**Zodpovedný riešiteľ:** Miroslav Kocifaj

**Trvanie projektu:** 1.1.2016 / 31.12.2019

**Evidenčné číslo projektu:** 2/0016/16

**Organizácia je** áno

**koordinátorom projektu:**

**Koordinátor:** Ústav stavebníctva a architektúry SAV

**Počet spoluriešiteľských** 0

**inštitúcií:**

**Čerpané financie:** VEGA SAV: 6286 €

Dosiahnuté výsledky:

KOCIFAJ, Miroslav. Retrieval of angular emission function from whole-city light sources using night-sky brightness measurements. In Optica, 2017, vol. 4, no. 2, p. 255-262. (7.727 - IF2016). (2017 - Current Contents). ISSN 2334-2536. Typ: ADCA

PETRŽALA, Jaromír - KÓMAR, Ladislav - KOCIFAJ, Miroslav. An advanced clear-sky model for more accurate irradiance and illuminance predictions for arbitrarily oriented inclined surfaces. In Renewable Energy, 2017, vol. 106, p. 212-221. (4.357 - IF2016). (2017 - Current Contents). ISSN 0960-1481. Typ: ADCA

PETRŽALA, Jaromír - KOCIFAJ, Miroslav - KÓMAR, Ladislav - SIMONEAU, Alexander. Submicrometer-sized nonspherical particle separation by laser beam. In Applied Optics, 2017, vol. 56, no. 29, p. 8081-8086. (1.650 - IF2016). (2017 - Current Contents). ISSN 0003-6935. Typ: ADCA

KÓMAR, Ladislav - KOCIFAJ, Miroslav. Tubular light-guide under broken cloud array - working plane illumination. In Lux Europa 2017 : proceedings of the european lighting conference, september 18-20, 2017, Ljubljana. - Ljubljana : Lighting Engineering Society of Slovenia, 2017, p. 486-492. ISBN 978-961-93733-4-7. Typ: AECA

KUNDRACIK, F. - BAZSÓ, Ágnes - KOCIFAJ, Miroslav - KÓMAR, Ladislav. Daylight transmission via hollow light pipes with fresnel (directional) reflection. In Lux Europa 2017 : proceedings of the european lighting conference, september 18-20, 2017, Ljubljana. - Ljubljana : Lighting Engineering Society of Slovenia, 2017, p. 355-357. ISBN 978-961-93733-4-7. Typ: AECA

KOCIFAJ, Miroslav - GUEYMARD, CH.A. High-resolution tilted surface illuminance/irradiance spectral model applicable to arbitrary sky conditions. In Lux Europa 2017 : proceedings of the european lighting conference, september 18-20, 2017, Ljubljana. - Ljubljana : Lighting Engineering Society of Slovenia, 2017, p. 407-411. ISBN 978-961-93733-4-7. Typ: AECA

**3.) Modelovanie pokritického pôsobenia tenkostenných za studena tvarovaných prvkov**  
(*Modelling of post-buckling behaviour and strength of thin-walled cold formed columns*)

|   |                                       |
|---|---------------------------------------|
| <b>Zodpovedný riešiteľ:</b>                   | Jozef Kriváček                        |
| <b>Trvanie projektu:</b>                      | 1.1.2015 / 31.12.2018                 |
| <b>Evidenčné číslo projektu:</b>              | 2/0154/15                             |
| <b>Organizácia je koordinátorom projektu:</b> | áno                                   |
| <b>Koordinátor:</b>                           | Ústav stavebníctva a architektúry SAV |
| <b>Počet spoluriešiteľských inštitúcií:</b>   | 0                                     |
| <b>Čerpané financie:</b>                      | VEGA SAV: 3143 €                      |

Dosiahnuté výsledky:

KRIVÁČEK, Jozef - SADOVSKÝ, Zoltán. On the choice of geometrical imperfections in GMNIA strength calculations of thin-walled structures. In ENGINEERING MECHANICS 2017 : book of full texts international conference. - Brno : Brno University of Technology, Institute of Solid Mechanics, Mechatronics and Biomechanics, 2017, p. 526-529. ISBN 978-80-214-5497-2. ISSN 1805-8248.

SADOVSKÝ, Zoltán - KRIVÁČEK, Jozef. Tolerances of imperfections and strength of cold-formed lipped channel column. In Journal of Constructional Steel Research, 2017, vol. 128, p. 762-771. (2.028 - IF2016). (2017 - Current Contents). ISSN 0143-974X.

KRIVÁČEK, Jozef - SADOVSKÝ, Zoltán. Vplyv geometrických imperfekcií na únosnosť osovo namáhaných valcových škrupín. In Oceľ, drevo, betón a sklo v konštrukciách : XLII. celoštátny aktív pracovníkov odboru oceľových konštrukcií so zahraničnou účasťou pri príležitosti 75. výročia

Katedry kovových a drevených konštrukcií SvF STU v Bratislave. - Bratislava : Spektrum STU, 2017, s. 121-126. ISBN 978-80-227-4734-9.

KRIVÁČEK, Jozef. Modelovanie excentricky tlačných tenkostenných konštrukcií. In INFO DNY MSC, Software : setkání uživatelů - Čejkovice, 7. - 8. 6. 2017 [elektronický zdroj]. - Brno : MSC software, 2017, 9 s

**4.) Vplyv opakovaného a dlhodobého namáhania na parametre interakcie pri sanácií železobetónových prvkov** (*Influence of repeated and long - term loading on interaction of parameters at reconstruction of reinforced concrete elements*)

**Zodpovedný riešiteľ:** Martin Križma  
**Trvanie projektu:** 1.1.2015 / 31.12.2018  
**Evidenčné číslo projektu:** 2/0033/2015  
**Organizácia je koordinátorom projektu:** áno  
**Koordinátor:** Ústav stavebníctva a architektúry SAV  
**Počet spoluriešiteľských inštitúcií:** 1 - Slovensko: 1  
**Čerpané financie:** VEGA SAV: 4191 €

Dosiahnuté výsledky:

KRIŽMA, Martin - BOLHA, Ľ. - MORAVČÍK, Martin - HOLÚBEK, Matúš. Influence of Contact of Damaged Reinforced Concrete Beam and Strengthening Slab for Deformation and Resistance of Reinforced Element in the Long-Term Loading. In Key Engineering Materials, 2017, vol. 738, p. 164-174. ISSN 1013-9826.

KRIŽMA, Martin - BOLHA, Ľ. - MORAVČÍK, Martin - HOLÚBEK, Matúš. Vplyv časového faktora na odolnosť a použiteľnosť poškodených a následne zosilnených betónových prvkov členitého prierezu = Influence of time factor on resistance and serviceability of the damaged and subsequently strengtened by concrete elements of rugged section. In Sanace 2017 : sborník recenzovaných přednášek sympozia. - Brno : Vysoké učení technické v Brně, 2017, s. 115-124. ISBN 978-80-214-5499-6.

KRIŽMA, Martin - BOLHA, Ľ. - MORAVČÍK, Martin - HOLÚBEK, Matúš. Influence of time factor on resistance and on serviceability of demaged and consequently reinforced concrete beams by additional application of external gerp panels. In New Trends in Statics and Dynamics of Buildings : proceedings of 15th international conference. - Bratislava : Slovak University of Technology in Bratislava, 2017, p. 29-38. ISBN 978-80-227-4732-5.(New Trends in Statics and Dynamics of Buildings : international conference).

MORAVČÍK, Martin - KRIŽMA, Martin - BAHLEDA, František. K aktuálnemu stavu vybratých predpätých mostov na Slovensku po 60 rokoch prevádzky. In Sanácia betónových konštrukcií : zborník príspevkov z 10. semunára. - Iris, 2017, s. 15-20. ISBN 978-80-8200-014-9.

**5.) Vysokoporézne anorganické materiály pre tepelno-izolačné aplikácie** (*High porous inorganic materials for thermal insulating applications*)

**Zodpovedný riešiteľ:** Eva Kuzielová  
**Trvanie projektu:** 1.1.2015 / 31.12.2018  
**Evidenčné číslo projektu:** 1/0696/15  
**Organizácia je koordinátorom projektu:** nie  
**Koordinátor:** Fakulta chemickej a potravinárskej technológie STU

**Počet spoluriešiteľských inštitúcií:** 0  
**Čerpané financie:** VEGA SAV: 1043 €

Dosiahnuté výsledky:

**6.) Monitorovanie tepelno - vlhkostného režimu UNESCO pamiatky kostola sv. Jakuba v Levoči a národnej pamiatky katedrály sv. Martina v Bratislave** (*Monitoring of the hygrothermal regime of the UNESCO object of St Jame's Church in Levoči and national heritage object St Martin's Cathedrale in Bratislava*)

**Zodpovedný riešiteľ:** Peter Matiašovský  
**Trvanie projektu:** 1.1.2016 / 31.12.2018  
**Evidenčné číslo projektu:** 2/0105/16  
**Organizácia je koordinátorom projektu:** áno  
**Koordinátor:** Ústav stavebníctva a architektúry SAV  
**Počet spoluriešiteľských inštitúcií:** 0  
**Čerpané financie:** VEGA SAV: 3080 €

Dosiahnuté výsledky:

**7.) Neplánované mesto: architektonické a urbanistické koncepcie 20. storočia a ich priemet do mestskej štruktúry Bratislavy**

**Zodpovedný riešiteľ:** Henrieta Moravčíková  
**Trvanie projektu:** 1.1.2017 / 31.12.2019  
**Evidenčné číslo projektu:** VEGA-2-0074-17  
**Organizácia je koordinátorom projektu:** áno  
**Koordinátor:** Ústav stavebníctva a architektúry SAV  
**Počet spoluriešiteľských inštitúcií:** 0  
**Čerpané financie:** VEGA SAV: 8381 €

Dosiahnuté výsledky:

MORAVČÍKOVÁ, Henrieta – LOVRA, Éva – PASTOREKOVÁ, Laura. Red or Blue? The Start of Modern Planning in Bratislava = Červený alebo modrý? Začiatky moderného plánovania Bratislavy. In *Architektúra & urbanizmus : journal of architectural and town-planning theory*, 2017, roč. 51, č. 1-2, s. 31-44. (2017 – Current Contents, Web of Science, Scopus). ISSN 0044-8680. Typ: AADB

HABERLANDOVÁ, Katarína. Nová Bratislava Josefa Mareka = The New Bratislava of Josef Marek. In *Architektúra & urbanizmus : journal of architectural and town-planning theory*, 2017, roč. 51, č. 3-4, s. 162-175. (2017 – Current Contents, Web of Science, Scopus). Typ: AADB

**8.) Štúdium procesov hydratácie a vývoja mikroštruktúry v mnohozložkových cementových spojivách** (*Study of hydration process and microstructure development in multi-component cementitious binders*)

**Zodpovedný riešiteľ:** Martin-Tchingnabé Palou  
**Trvanie projektu:** 1.1.2017 / 31.12.2020  
**Evidenčné číslo projektu:** 2/0097/17  
**Organizácia je koordinátorom projektu:** áno  
**Koordinátor:** Ústav stavebníctva a architektúry SAV  
**Počet spoluriešiteľských inštitúcií:** 0  
**Čerpané financie:** VEGA SAV: 9429 €

Dosiahnuté výsledky:

**9.) Viazané úlohy tepelných a elektromechanických polí v piezoelektrických materiáloch s poréznou mikroštruktúrou** (*Coupled problems of thermal and electromechanical fields in advanced materials with porous microstructure*)

**Zodpovedný riešiteľ:** Vladimír Sládek  
**Trvanie projektu:** 1.1.2016 / 31.12.2019  
**Evidenčné číslo projektu:** VEGA 2/0046/16  
**Organizácia je koordinátorom projektu:** áno  
**Koordinátor:** Ústav stavebníctva a architektúry SAV  
**Počet spoluriešiteľských inštitúcií:** 0  
**Čerpané financie:** VEGA SAV: 11524 €

Dosiahnuté výsledky:

J. Sladek, V. Sladek, P. Stanak, E. Pan: FEM formulation for size-dependent theory with application to micro coated piezoelectric and piezomagnetic fiber-composites, *Comput. Mech.* 59 (2017), 93-105.

J. Sladek, V. Sladek, M. Wünsche, C.L. Tan: Fracture mechanics analysis of size-dependent piezoelectric solids under thermal load, *Key Eng. Materials* 754 (2017), 165-168.

A. Tadeu, A. Romero, P. Stanak, J. Sladek, V. Sladek, P. Galvin, J. Antonio: Wave propagation in fluid-filled boreholes drilled in nonhomogeneous media: BEM-MLPG versus BEM-FEM coupling, In: *Proc. of ICCES 2017 (Int. Conf. on Computational & Experimental Engineering and Science)*, Funchal, Madeira Island, Portugal, 26-30th June 2017; CD ROM Proceedings

V. Sladek, J. Sladek, L. Sator, M. Repka: FGM elastic plates under thermal loading, In: *Proc. of the 18th International Scientific Conf. TRANSFER 2017, Trencianske Teplice, Slovakia*, 23-24 November 2017, CD ROM, ISBN 978-80-8075-787-8.

**Programy: APVV**

**10.) Zovšeobecnený model jasu/žiary nočnej oblohy a jeho aplikácia pri získavaní emisnej funkcie miest** (*Generalized skyglow model and its application to retrieval of city emission function*)

**Zodpovedný riešiteľ:** Miroslav Kocifaj  
**Trvanie projektu:** 1.7.2015 / 31.12.2018  
**Evidenčné číslo projektu:** APVV-14-0017  
**Organizácia je koordinátorom projektu:** áno  
**Koordinátor:** Ústav stavebníctva a architektúry SAV

**Počet spoluriešiteľských inštitúcií:** 0  
**Čerpané financie:** APVV: 43450 €

Dosiahnuté výsledky:

SÁNCHEZ DE MIGUEL, A. - AUBÉ, Martin - ZAMORANO, J. - KOCIFAJ, Miroslav - ROBY, Johanne - TAPIA, C. Sky Quality Meter measurements in a colour-changing world. In Monthly Notices of the Royal Astronomical Society, 2017, vol. 476, p. 2966-2979. (4.961 - IF2016). (2017 - Current Contents, WOS, SCOPUS, NASA ADS). ISSN 0035-8711. Typ: ADCA

KOCIFAJ, Miroslav. Retrieval of angular emission function from whole-city light sources using night-sky brightness measurements. In Optica, 2017, vol. 4, no. 2, p. 255-262. (7.727 - IF2016). (2017 - Current Contents). ISSN 2334-2536. Typ: ADCA

SCHMIDT, F. - ANDRIEU, F. - COSTARD, F. - KOCIFAJ, Miroslav - MERESSECU, A. G. Formation of recurring slope lineae on Mars by rarefied gas-triggered granular flows. In Nature geoscience, 2017, vol. 10, p. 1-5. (13.941 - IF2016). (2017 - Current Contents). ISSN 1752-0894. Typ: ADCA

PETRŽALA, Jaromír - KOCIFAJ, Miroslav. Research on spectral factors towards determining nocturnal ground irradiance under overcast sky conditions in densely populated regions. In Journal of Quantitative Spectroscopy & Radiative Transfer, 2017, vol. 189, p. 126-132. (2.419 - IF2016). (2017 - Current Contents). ISSN 0022-4073. Typ: ADCA

PETRŽALA, Jaromír - KOCIFAJ, Miroslav - KÓMAR, Ladislav - SIMONEAU, Alexander. Submicrometer-sized nonspherical particle separation by laser beam. In Applied Optics, 2017, vol. 56, no. 29, p. 8081-8086. (1.650 - IF2016). (2017 - Current Contents). ISSN 0003-6935. Typ: ADCA

PETRŽALA, Jaromír - KOCIFAJ, Miroslav. On the correlation between SQM data and zenith brightness. In Lux Europa 2017 : proceedings of the european lighting conference, september 18-20, 2017, Ljubljana. - Ljubljana : Lighting Engineering Society of Slovenia, 2017, p. 637-643. ISBN 978-961-93733-4-7. Typ: AECA

BARENTINE, John C. - WALKER, Constance E. - KOCIFAJ, Miroslav - JUAN, Amy - KANEMOTO, John - MONRAD, Christian K. Skyglow Changes Over Tucson, Arizona, Resulting From A Municipal LED Street Lighting Conversion. In International Conference on Light Pollution Theory, Modelling and Measurements : book of abstracts. - 2017, p. 60.(Light Pollution Theory, Modelling and Measurements : international conference). Typ: AFG

KOCIFAJ, Miroslav. Retrieval of angular emission function from whole-city light sources using night brightness measurements made on a local meridian from zenith to horizon. In International Conference on Light Pollution Theory, Modelling and Measurements : book of abstracts. - 2017, p. 53.(Light Pollution Theory, Modelling and Measurements : international conference). Typ: AFG

KOCIFAJ, Miroslav - KUNDRACIK, F. - ŠTEFÍK, Ondrej. Cumulative light emission from heterogeneous light-emitting or blocking urban environment. In International Conference on Light Pollution Theory, Modelling and Measurements : book of abstracts. - 2017, p. 25.(Light Pollution Theory, Modelling and Measurements : international conference). Typ: AFG

KOCIFAJ, Miroslav - KÓMAR, Ladislav - KUNDRACIK, František. A portable sky scanner for measuring extremely low intensities. In International Conference on Light Pollution Theory, Modelling and Measurements : book of abstracts. - 2017, p. 22.(Light Pollution Theory, Modelling and Measurements : international conference). Typ: AFG

KUNDRACIK, František - KOCIFAJ, Miroslav - MONRAD, Christian K. - KINZEY, Bruce R. - PERRIN, Tess E. The possible sky glow effects of lighting system conversion in the City of Tucson. In International Conference on Light Pollution Theory, Modelling and Measurements : book of abstracts. - 2017, p. 59.(Light Pollution Theory, Modelling and Measurements : international conference). Typ: AFG

**11.) Nezamýšľané mesto: Architektonické a urbanistické koncepcie 19. a 20. storočia v mestskej štruktúre Bratislavy** (*Unintended City: Architectural and town-planning Conceptions of 19th and 20th century in the Urban Structure of Bratislava*)

**Zodpovedný riešiteľ:** Henrieta Moravčíková  
**Trvanie projektu:** 1.11.2017 / 30.6.2020  
**Evidenčné číslo projektu:** APVV-16-0584  
**Organizácia je koordinátorom projektu:** áno  
**Koordinátor:** Ústav stavebníctva a architektúry SAV  
**Počet spoluriešiteľských inštitúcií:** 0  
**Čerpané financie:** APVV: 20252 €

Dosiahnuté výsledky:

**12.) Výskum vysokohodnotných cementových kompozitov za hydrotermálnych podmienok pre potenciálne využitie v hĺbkových vrtoch** (*Research on High Performance cementitious Composites under hydrothermal conditions for potential application in deep borewells*)

**Zodpovedný riešiteľ:** Martin-Tchingnabé Palou  
**Trvanie projektu:** 1.7.2016 / 31.12.2020  
**Evidenčné číslo projektu:** APVV-15-0631  
**Organizácia je koordinátorom projektu:** áno  
**Koordinátor:** Ústav stavebníctva a architektúry SAV  
**Počet spoluriešiteľských inštitúcií:** 0  
**Čerpané financie:** APVV: 45110 €

Dosiahnuté výsledky:

**13.) Multiškálové modelovanie viazaných polí v kompozitných materiáloch** (*Multiscale modelling of coupled fields in composite materials*)

**Zodpovedný riešiteľ:** Ján Sládek  
**Trvanie projektu:** 1.7.2015 / 31.12.2018  
**Evidenčné číslo projektu:** APVV-14-0216  
**Organizácia je koordinátorom projektu:** áno  
**Koordinátor:** Ústav stavebníctva a architektúry SAV  
**Počet spoluriešiteľských inštitúcií:** 0  
**Čerpané financie:** APVV: 64303 €

Dosiahnuté výsledky:

P.L. Bishay, J. Sladek, V. Sladek, X.W. Gao: Analysis of Elastic Media with Voids Using a Mixed-Collocation Finite-Element Method, Journal of Engineering Mechanics 143 (2017) No4, 04016119-14.  
H.H. Liu, D.L. Young, J. Sladek, V. Sladek: Three-dimensional analysis for functionally graded

piezoelectric semiconductors, Journal of Intelligent Material Systems and Structures 28 (2017) 1391-1406.

J. Sladek, V. Sladek, P. Stanak, Ch. Zhang, C.L. Tan: Fracture mechanics analysis of size-dependent piezoelectric solids. International Journal of Solids and Structures, 113 (2017) 1-9.

J. Sladek, V. Sladek, H.H.-H. Lu, D.L. Young: The FEM analysis of FGM piezoelectric semiconductor problems. Composite Structures 163 (2017) 13-20.

J. Sladek, V. Sladek, P. Stanak, E. Pan: FEM formulation for size-dependent theory with application to micro coated piezoelectric and piezomagnetic fiber-composites, Computational Mechanics 59 (2017) 93-105.

J. Sladek, V. Sladek, E. Pan: Effective properties of coated fiber-composites with piezoelectric and piezomagnetic phases. Journal of Intelligent Material Systems and Structures, 28 (2017) 97-107.

J. Sladek, V. Sladek, S. Hrcek, E. Pan: The nonlocal and gradient theories for large deformation of piezoelectric nanoplates. Composite Structures 172 (2017) 119-129.

J. Sladek, V. Sladek, M. Repka, J. Kasala, P. Bishay: Evaluation of effective material properties in magneto-electro-elastic composite materials. Composite Structures 174 (2017) 176-186.

P.L. Bishay, M. Repka, V. Sladek, J. Sladek: On the characterization of porosity-related parameters in micro-dilatation theory. Acta Mechanica 228 (2017) 1631-1644.

J. Sladek, V. Sladek, S. Hrcek: The MLPG in gradient theory for size-dependent magneto-electroelasticity, Computer Methods in Materials Science 17 (2017) 76-82.

J. Sladek, V. Sladek, M. Wunsche, C.L. Tan: Fracture mechanics analysis of size-dependent piezoelectric solids under a thermal load. Key Engineering Materials 754 (2017) 165-168.

J. Sladek, V. Sladek: Crack of piezoelectric solids under a thermal load. 18th Int. Conf., Transfer 2017, Trenčianske Teplice, Slovakia, 23-24 November 2017, CD ROM, ISBN 978-80-8075-787-8.

J. Sladek, V. Sladek, J. Kasala, E. Pan: Nonlocal and gradient theories of piezoelectric nanoplates. Procedia Engineering 190 (2017) 178-185.

#### 14.) Multifyzikálne problémy v doskách z funkcionálne gradientných materiálov

*(Multiphysical problems in functionally graded materials plates)*

|   |                                       |
|---|---------------------------------------|
| <b>Zodpovedný riešiteľ:</b>                   | Vladimír Sládek                       |
| <b>Trvanie projektu:</b>                      | 1.7.2015 / 30.6.2019                  |
| <b>Evidenčné číslo projektu:</b>              | APVV-14-0440                          |
| <b>Organizácia je koordinátorom projektu:</b> | áno                                   |
| <b>Koordinátor:</b>                           | Ústav stavebníctva a architektúry SAV |
| <b>Počet spoluriešiteľských inštitúcií:</b>   | 0                                     |
| <b>Čerpané financie:</b>                      | APVV: 58934 €                         |

#### Dosiahnuté výsledky:

Y.C. Chiang, D.L. Young, J. Sladek, V. Sladek: Local radial basis function collocation method for bending analyses of quasicrystal plates, Applied Mathematical Modelling 50 (2017), 463-483.

L. Sator, V. Sladek, J. Sladek: Multi-gradation coupling effects in FGM plates, Composite Structures 171 (2017), 515-527.

L. Sator, V. Sladek, J. Sladek: Bending analysis of FGM plates under thermal load, Procedia Engineering 190 (2017), 54-61.

V. Sladek, B. Musil, J. Sladek, J. Kasala: Microstructural evaluation of effective elasticity coefficients in materials with micro-voids, Procedia Engineering 190 (2017), 170-177.

M. Repka, V. Sladek, J. Sladek: Numerical analysis of poro-elastic materials described by the micro-dilatation theory, Procedia Engineering 190 (2017), 248-254.

V. Sladek, L. Sator, J. Sladek: Simulations of coupling effects in vibration of FGM plates by mesh-free methods, Int. Jour. Comp. Meth. And Exp. Measurements, 5 (2017), 306-316. DOI:



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V. Sladek, J. Sladek, L. Sator, M. Repka: Modelling and numerical simulations of coupling effects in FGM elastic plates, In: Proc. of ICCES 2017 (Int. Conf. on Computational & Experimental Engineering and Science), Funchal, Madeira Island, Portugal, 26-30th June 2017; CD ROM Proceedings

M. Repka, V. Sladek, J. Sladek: Bending of elastic plates with micro-voids, In: Proc. of abstracts ICCS20 (20th Int. Conf. on Composite Structures), Paris, France, 4-7 Sept. 2017), p. 22.

V. Sladek, M. Repka, J. Sladek: Gradient elasticity theory enrichment of plate bending theories, In: Proc. of abstracts ICCS20 (20th Int. Conf. on Composite Structures), Paris, France, 4-7 Sept. 2017), p. 102.

L. Sator, V. Sladek, J. Sladek: Bending of FGM plates under thermal load: Generalized thermoelasticity analysis by a meshless method, In: Proc. of abstracts MechComp3 (3rd Int. Conf. on Mechanics of Composites), Bologna, Italy, 4-7 July 2017), p. 20.

V. Sladek, J. Sladek, L. Sator, M. Repka: FGM elastic plates under thermal loading, In: Proc. of the 18th International Scientific Conf. TRANSFER 2017, Trencianske Teplice, Slovakia, 23-24 November 2017, CD ROM, ISBN 978-80-8075-787-8.

M. Repka, V. Sladek, J. Sladek: The numerical studies of symmetric and non-symmetric strain gradient theory of elasticity, In: Computational Mechanics 2017 (33rd Conf. ), Book of extended abstracts (V. adamek, A. Jonasova, S. Planicka, M. Zajicek, Eds.), Hotel Horizont, Špičák, Czech Republic, 6-8 Nov. 2017, pp. 109-110. ISBN 978-80-261-0748-4

L. Sator, V. Sladek, J. Sladek: Transient analysis of tin FGM plates with multi-gradation coupling effects, In: Computational Mechanics 2017 (33rd Conf. ), Book of extended abstracts (V. adamek, A. Jonasova, S. Planicka, M. Zajicek, Eds.), Hotel Horizont, Špičák, Czech Republic, 6-8 Nov. 2017, pp. 117-118. ISBN 978-80-261-0748-4

## Programy: Centrá excelentnosti SAV

**15.) Hradý na Slovensku. Interdisciplinárny prierezový pohľad na fenomén hradov. Centrum excelentnosti SAV** (*Castles in Slovakia. Interdisciplinary cross-sectional view on the castle phenomenon. Centre of Excellence of the Slovak Academy of Sciences*)

|   |                            |
|---|----------------------------|
| <b>Zodpovedný riešiteľ:</b>                   | Ján Lukačka                |
| <b>Zodpovedný riešiteľ v organizácii SAV:</b> | Henrieta Moravčíková       |
| <b>Trvanie projektu:</b>                      | 1.10.2013 / 30.9.2017      |
| <b>Evidenčné číslo projektu:</b>              | PSAV č. 110 z 03. 10. 2013 |
| <b>Organizácia je koordinátorom projektu:</b> | nie                        |
| <b>Koordinátor:</b>                           | Historický ústav SAV       |
| <b>Počet spoluriešiteľských inštitúcií:</b>   | 0                          |
| <b>Čerpané financie:</b>                      | -                          |

Dosiahnuté výsledky:

## Programy: SASPRO

**16.) Multiškálové modelovanie vrstevnatých, vláknami vystužených a poréznych magnetoelektrických materiálov** (*Multiscale modeling of layered, fibre reinforced and porous magnetoelectric materials*)

**Zodpovedný riešiteľ:** Michael Wünsche  
**Trvanie projektu:** 1.9.2015 / 31.8.2017  
**Evidenčné číslo projektu:** 0106/01/01  
**Organizácia je koordinátorom projektu:** áno  
**Koordinátor:** Ústav stavebníctva a architektúry SAV  
**Počet spoluriešiteľských inštitúcií:** 0  
**Čerpané financie:** SASPRO SAV: 24319 €  
SASPRO EÚ: 16212 €

Dosiahnuté výsledky:

SLÁDEK, Ján - SLÁDEK, Vladimír - WÜNSCHE, Michael - TAN, C. L. Crack analysis of size-dependent piezoelectric solids under a thermal load. In Engineering Fracture Mechanics, 2017, vol. 182, p. 187-201. (2.151 - IF2016). (2017 - Current Contents). ISSN 0013-7944.

WÜNSCHE, Michael - SLÁDEK, Ján - SLÁDEK, Vladimír - ZHANG, Ch. - GARCIA SANCHEZ, F. - SAEZ, A. Dynamic crack analysis in piezoelectric solids under time-harmonic loadings with a symmetric Galerkin boundary element method. In Engineering Analysis with Boundary Elements, 2017, vol. 84, p. 141-153. (1.721 - IF2016). (2017 - Current Contents). ISSN 0955-7997.

## Príloha C

### Publikačná činnosť organizácie (generovaná z ARL)

#### AAA Vedecké monografie vydané v zahraničných vydavateľstvách

- AAA01 NEKVINDOVÁ, Terezie - KRAMEROVÁ, Daniela - MORAVČÍKOVÁ, Henrieta - STRAKOŠ, Martin - BERNÁTEK, Martin - BÜNGEROVÁ, Vladimíra - SYLVESTROVÁ, Marta. Automat na výstavu : československý pavilon na Expo 67 v Montrealu. Recenzenti Martina Pachmanová, Jan Wollner. Galerie výtvarného umění v Chebu : Akademie výtvarných umění v Praze, 2017. 298 s. ISBN 978-80-87395-31-8.

#### ABC Kapitoly vo vedeckých monografiách vydané v zahraničných vydavateľstvách

- ABC01 MORAVČÍKOVÁ, Henrieta. Emancipated but still accompanied : the first generation of women architects in Slovakia. In Ideological Equals: Women Architects in Socialist Europe 1945-1989. - Oxford : Taylor and Francis, 2017, p. 48-62. ISBN 978-1-315-58777-6; 978-1-472-46926-7.

#### ADCA Vedecké práce v zahraničných karentovaných časopisoch – impaktovaných

- ADCA01 BISHAY, P.L. - REPKA, Miroslav - SLÁDEK, Vladimír - SLÁDEK, Ján. On the characterization of porosity-related parameters in micro-dilatation theory. In Acta Mechanica, 2017, vol. 228, iss. 5, p. 1631-1644. (1.851 - IF2016). (2017 - Current Contents). ISSN 0001-5970.(APVV-14-0216 : Multiškálové modelovanie viazaných polí v kompozitných materiáloch).
- ADCA02 BISHAY, P.L. - SLÁDEK, Ján - SLÁDEK, Vladimír - GAO, X.W. Analysis of Elastic Media with Voids Using a Mixed-Collocation Finite-Element Method. In Journal of Engineering Mechanics, 2017, vol. 143, iss. 4, p. 16119-16119. (1.764 - IF2016). (2017 - Current Contents). ISSN 0733-9399.(APVV-14-0216 : Multiškálové modelovanie viazaných polí v kompozitných materiáloch).
- ADCA03 BOHÁČ, Martin - PALOU, Martin T. - NOVOTNÝ, Radoslav - MÁŠILKO, J. - ŠOUKAL, František - OPRAVIL, Tomáš. Influence of temperature on early hydration of Portland cement-metakaolin-slag system. In Journal of Thermal Analysis and Calorimetry, 2017, vol. 127, p. 309-318. (1.953 - IF2016). (2017 - Current Contents). ISSN 1388-6150.(VEGA 2/0082/14 : Syntéza a charakterizácia chemicky viazaných fosfátových keramických spojív).
- ADCA04 CHIANG, Y. C. - YOUNG, D. L. - SLÁDEK, Ján - SLÁDEK, Vladimír. Local radial basis function collocation method for bending analyses of quasicrystal plates. In Applied Mathematical Modeling, 2017, vol. 50, p. 463-483. (2.350 - IF2016). (2017 - Current Contents). ISSN 0307-904X.
- ADCA05 KOCIFAJ, Miroslav. Retrieval of angular emission function from whole-city light sources using night-sky brightness measurements. In Optica, 2017, vol. 4, no. 2, p. 255-262. (7.727 - IF2016). (2017 - Current Contents). ISSN 2334-2536.(APVV-14-0017 : Zovšeobecnený model jasu/žiary nočnej oblohy a jeho aplikácia pri získavaní emisnej funkcie miest. VEGA 2/0016/16 : Optické vlastnosti zalomených svetlovodov za podmienok nehomogénnej oblačnosti s ľubovoľným pokrytím oblohy).
- ADCA06 KUZIELOVÁ, Eva - ŽEMLIČKA, Matúš - MÁŠILKO, J. - PALOU, Martin T. Pore structure development of blended G-oil well cement submitted to hydrothermal curing conditions. In Geothermics, 2017, vol. 68, p. 86-93. (2.553 - IF2016). (2017 -

- Current Contents). ISSN 0375-6505.(APVV-15-0631 : Výskum vysokohodnotných cementových kompozitov za hydrotermálnych podmienok pre potenciálne využitie v hĺbkových vrtoch. VEGA 1/0696/15 : Vysokoporézne anorganické materiály pre tepelno-izolačné aplikácie).
- ADCA07 LU, H. H. H. - YOUNG, D. L. - SLÁDEK, Ján - SLÁDEK, Vladimír. Three-dimensional analysis for functionally graded piezoelectric semiconductors. In Journal of Intelligent Material Systems and Structures, 2017, vol. 28, no.11, p. 1391-1406. (2.255 - IF2016). (2017 - Current Contents). ISSN 1045-389X.(APVV-14-0216 : Multiškálové modelovanie viazaných polí v kompozitných materiáloch).
- ADCA08 PETRŽALA, Jaromír - KOCIFAJ, Miroslav. Research on spectral factors towards determining nocturnal ground irradiance under overcast sky conditions in densely populated regions. In Journal of Quantitative Spectroscopy & Radiative Transfer, 2017, vol. 189, p. 126-132. (2.419 - IF2016). (2017 - Current Contents). ISSN 0022-4073.(APVV-14-0017 : Zovšeobecnený model jasu/žiary nočnej oblohy a jeho aplikácia pri získavaní emisnej funkcie miest).
- ADCA09 PETRŽALA, Jaromír - KÓMAR, Ladislav - KOCIFAJ, Miroslav. An advanced clear-sky model for more accurate irradiance and illuminance predictions for arbitrarily oriented inclined surfaces. In Renewable Energy, 2017, vol. 106, p. 212-221. (4.357 - IF2016). (2017 - Current Contents). ISSN 0960-1481.(VEGA 2/0016/16 : Optické vlastnosti zalomených svetlovodov za podmienok nehomogénnej oblačnosti s ľubovoľným pokrytím oblohy).
- ADCA10 PETRŽALA, Jaromír - KOCIFAJ, Miroslav - KÓMAR, Ladislav - SIMONEAU, Alexandre. Submicrometer-sized nonspherical particle separation by laser beam. In Applied Optics, 2017, vol. 56, no. 29, p. 8081-8086. (1.650 - IF2016). (2017 - Current Contents). ISSN 0003-6935.(APVV-14-0017 : Zovšeobecnený model jasu/žiary nočnej oblohy a jeho aplikácia pri získavaní emisnej funkcie miest. VEGA 2/0016/16 : Optické vlastnosti zalomených svetlovodov za podmienok nehomogénnej oblačnosti s ľubovoľným pokrytím oblohy).
- ADCA11 SADOVSKÝ, Zoltán - KORONTHÁLYOVÁ, Oľga. Exploration of probabilistic mould growth assessment. In Applied Mathematical Modeling, 2017, vol. 42, p. 566-575. (2.350 - IF2016). (2017 - Current Contents). ISSN 0307-904X.(VEGA 2/0154/15 : Modelovanie pokritického pôsobenia tenkostenných za studena tvarovaných prvkov).
- ADCA12 SADOVSKÝ, Zoltán - KRIVÁČEK, Jozef. Tolerances of imperfections and strength of cold-formed lipped channel column. In Journal of Constructional Steel Research, 2017, vol. 128, p. 762-771. (2.028 - IF2016). (2017 - Current Contents). ISSN 0143-974X.(VEGA 2/0154/15 : Modelovanie pokritického pôsobenia tenkostenných za studena tvarovaných prvkov).
- ADCA13 SÁNCHEZ DE MIGUEL, A. - AUBÉ, Martin - ZAMORANO, J. - KOCIFAJ, Miroslav - ROBY, Johanne - TAPIA, C. Sky Quality Meter measurements in a colour-changing world. In Monthly Notices of the Royal Astronomical Society, 2017, vol. 476, p. 2966-2979. (4.961 - IF2016). (2017 - Current Contents, WOS, SCOPUS, NASA ADS). ISSN 0035-8711.(APVV-14-0017 : Zovšeobecnený model jasu/žiary nočnej oblohy a jeho aplikácia pri získavaní emisnej funkcie miest).
- ADCA14 SÁTOR, Ladislav - SLÁDEK, Vladimír - SLÁDEK, Ján. Multi-gradation coupling effects in FGM plates. In Composite Structures, 2017, vol. 171, p. 515-527. (3.858 - IF2016). (2017 - Current Contents). ISSN 0263-8223.(APVV-14-0440 : Multifyzikálne problémy v doskách z funkcionálne gradientných materiálov).
- ADCA15 SCHMIDT, F. - ANDRIEU, F. - COSTARD, F. - KOCIFAJ, Miroslav - MERESESCU, A. G. Formation of recurring slope lineae on Mars by rarefied gas-triggered granular flows. In Nature geoscience, 2017, vol. 10, p. 1-5. (13.941 -

- IF2016). (2017 - Current Contents). ISSN 1752-0894.(APVV-14-0017 : Zovšeobecnený model jasu/žiary nočnej oblohy a jeho aplikácia pri získavaní emisnej funkcie miest).
- ADCA16 SLÁDEK, Ján - SLÁDEK, Vladimír - LU, H. H. H. - YOUNG, D. L. The FEM analysis of FGM piezoelectric semiconductor problems. In Composite Structures, 2017, vol. 163, p. 13-20. (3.858 - IF2016). (2017 - Current Contents). ISSN 0263-8223.(APVV-14-0216 : Multiškálové modelovanie viazaných polí v kompozitných materiáloch).
- ADCA17 SLÁDEK, Ján - SLÁDEK, Vladimír - STAŇÁK, Peter - ZHANG, Ch. - TAN, C. L. Fracture mechanics analysis of size-dependent piezoelectric solids. In International Journal of Solids and Structures, 2017, vol. 113, p. 1-9. (2.760 - IF2016). (2017 - Current Contents). ISSN 0020-7683.(APVV-14-0216 : Multiškálové modelovanie viazaných polí v kompozitných materiáloch).
- ADCA18 SLÁDEK, Ján - SLÁDEK, Vladimír - HRCEK, S. - PAN, E. The nonlocal and gradient theories for a large deformation of piezoelectric nanoplates. In Composite Structures, 2017, vol. 172, p. 119-129. (3.858 - IF2016). (2017 - Current Contents). ISSN 0263-8223.(APVV-14-0216 : Multiškálové modelovanie viazaných polí v kompozitných materiáloch).
- ADCA19 SLÁDEK, Ján - SLÁDEK, Vladimír - STAŇÁK, Peter - PAN, E. FEM formulation for size-dependent theory with application to micro coated piezoelectric and piezomagnetic fiber-composites. In Computational Mechanics, 2017, vol. 59, no. 1, p. 93-105. (2.861 - IF2016). (2017 - Current Contents). ISSN 0178-7675.(APVV-14-0216 : Multiškálové modelovanie viazaných polí v kompozitných materiáloch. VEGA 2/0046/16 : Viazané úlohy tepelných a elektromechanických polí v piezoelektrických materiáloch s poréznu mikroštruktúrou).
- ADCA20 SLÁDEK, Ján - SLÁDEK, Vladimír - REPKA, Miroslav - KASALA, J. - BISHAY, P.L. Evaluation of effective material properties in magneto-electro-elastic composite materials. In Composite Structures, 2017, vol. 174, p. 176-186. (3.858 - IF2016). (2017 - Current Contents). ISSN 0263-8223.(APVV-14-0216 : Multiškálové modelovanie viazaných polí v kompozitných materiáloch. VEGA 1/0145/16).
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#### **ADDB Vedecké práce v domácich karentovaných časopisoch – neimpaktovaných**

- ADDB01 HABERLANDOVÁ, Katarína. Nová Bratislava Josefa Mareka = The New Bratislava of Josef Marek. In Architektúra & urbanizmus : journal of architectural and town-planning theory, 2017, roč. 51, č. 3-4, s. 162-175. (2017 - Current Contents, Web of Science, Scopus). ISSN 0044-8680.(VEGA 2/0074/17 : Neplánované mesto: architektonické a urbanistické koncepcie 20. storočia a ich priemet do mestskej štruktúry Bratislavy. APVV-16-0584 : Nezamýšľané mesto: Architektonické a urbanistické koncepcie 19. a 20. storočia v mestskej štruktúre Bratislavy).
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- ADFB02 PASTOREKOVÁ, Laura. Architektúra historických kasární na Slovensku : historicko-spoločenský a architektonický vývoj do roku 1918. In Vojenská história : časopis pre vojenskú históriu, múzejníctvo a archívniectvo, 2017, roč. 21, č. 4, s. 42-63. ISSN 1335-3314.
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#### **ADMA Vedecké práce v zahraničných impaktovaných časopisoch registrovaných v databázach Web of Science alebo SCOPUS**

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- ADMA02 KUZIELOVÁ, Eva - ŽEMLIČKA, Matúš - BARTONIČKOVÁ, Eva - PALOU, Martin T.. The correlation between porosity and mechanical properties of multicomponent systems consisting of Portland cement–slag–silica fume–metakaolin. In Construction and Building Materials, 2017, vol. 135, p. 306-314. (3.169 - IF2016). ISSN 0950-0618.(VEGA 1/0696/15 : Vysokoporézne anorganické materiály pre tepelno-izolačné aplikácie. APVV-15-0631 : Výskum vysokohodnotných cementových kompozitov za hydrotermálnych podmienok pre potenciálne využitie v hĺbkových vrtoch).

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**AECA Vedecké práce v zahraničných recenzovaných zborníkoch a kratšie kapitoly/state v zahraničných vedeckých monografiách alebo VŠ učebniciach**

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- AECA06     KRIŽMA, Martin - BOLHA, L. - MORAVČÍK, Martin - HOLUBEK, Matúš. Vplyv časového faktora na odolnosť a použiteľnosť poškodených a následne zosilnených betónových prvkov členitého prierezu = Influence of time factor on resistance and serviceability of the damaged and subsequently strengtened by concrete elements of rugged section. In Sanace 2017 : zborník recenzovaných prednášok sympozia. - Brno : Vysoké učení technické v Brně, 2017, s. 115-124. ISBN 978-80-214-5499-6.(VEGA 2/0033/15 : Vplyv opakovaného a dlhodobého namáhania na parametre interakcie pri sanácii železobetónových prvkov).
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**AEDA Vedecké práce v domácich recenzovaných zborníkoch, kratšie kapitoly/state v domácich monografiách alebo VŠ učebniciach**

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- AEDA02 DUBNIČKA, Roman - LIPNICKÝ, Lukáš - DARULA, Stanislav. Comparison of calculation softwares for daylighting of buildings = Porovnanie výpočtových programov pre denné osvetlenie v budovách. In LIGHT - SVETLO 2017 : proceedings of the 22nd international conference. - Bratislava : Slovenská svetlotechnická spoločnosť, 2017, p. 327-331. ISBN 978-80-972865-0-7.
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- AEDA06 SÁTOR, Ladislav - SLÁDEK, Vladimír - SLÁDEK, Ján. Influence of in-plane variation of material properties on the response of FGM plates under thermal load. In New Trends in Statics and Dynamics of Buildings : proceedings of 15th international conference. - Bratislava : Slovak University of Technology in Bratislava, 2017, p. 22-28. ISBN 978-80-227-4732-5.(APVV-14-0440 : Multifyzikálne problémy v doskách z funkcionálne gradientných materiálov. New Trends in Statics and Dynamics of Buildings : international conference).
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- AEC09 KORONTHÁLYOVÁ, Oľga - MATIAŠOVSKÝ, Peter. Moisture dependent thermal conductivity analysis of the low density CSH based materials. In Proceedings of the 6th Symposium Building Physics in Nordic Countries. - Trondheim : Norwegian University of Science and Technology, 2002, p. 515-522.

Citácie:

1. [3.1] SUCHORAB, Z. *Zastosowanie techniki reflektometrii w domene czasu do oceny stanu zawilgoocenia przegrod budowlanych. Lublin, Komitet Inżynierii Środowiska PAN, 2016, 191 p, ISBN: 978-83-63714-32-1.*

- AEC10 MATIAŠOVSKÝ, Peter - KORONTHÁLYOVÁ, Oľga. Analysis and modelling of effective thermal conductivity of dry porous building materials. In Proceedings of the 8th Symposium on Building Physics in Nordic Countries. Editor Carsten Rode. - Copenhagen : Danish Society of Engineers, IDA, 2008, p. 285-291. ISBN 978-87-7877-265-7.

Citácie:

1. [1.1] CHO, Y. S. - OH, I. A. - JUNG, N. R. *Super-insulating properties of porous ceramic particles fabricated by a self-assembly process using complex fluids. In JOURNAL OF CERAMIC PROCESSING RESEARCH. ISSN 1229-9162, 2016, vol. 17, no. 6, p. 573-580., WOS*

- AEC11 PALOU, Martin T. - MAJLING, J. - JANOTKA, Ivan. The performance of blended cements based on sulphoaluminate-belite and Portland cements. In Proceedings of the 11-th International Congress on Chemistry of Cement : Durban, South Africa, 11-16 May 2003. - Durban : G. Grieve and G. Oweis, 2003, p. 1896-1902. ISBN 0-9584085-8-0.

Citácie:

1. [1.1] MOSONYI, E. - FAZAKAS, J. - SPATARU, M. - HALMAGYI, T. *Chemical-mineralogical characterisation of belites from experimental sab clinkers. In STUDIA UNIVERSITATIS BABES-BOLYAI CHEMIA. ISSN 1224-7154, 2016, vol. 61, no. 4, p. 163-176., WOS*

**\*AED Vedecké práce v domácich recenzovaných vedeckých zborníkoch, monografiách**

- AED01 JUHÁSOVÁ, Emília - MATYS, M. - FRANKOVSKÁ, J. - LABÁK, Peter. Cooperative approach of geotechnical and earthquake engineering in seismic input assessment. In Proceedings of CEI Conference : Bratislava, 24-25 October 2005.



Editori M. Bielik, P. Moczo. - Bratislava : FNS CU, 2005, p. 91-97. ISBN 80-223-2116-8.

**Citácie:**

1. [1.1] SUL'OVSKA, M. - KOPECKY, M. - PANUSLA, J. *Stabilization of landslide area for foundations of highway bridge. In 16TH INTERNATIONAL MULTIDISCIPLINARY SCIENTIFIC GEOCONFERENCE, SGEM 2016: SCIENCE AND TECHNOLOGIES IN GEOLOGY, EXPLORATION AND MINING, VOL III. ISSN 1314-2704, 2016, p. 293-300., WOS*

**\*AEF Vedecké práce v domácich nerecenzovaných vedeckých zborníkoch, monografiách**

AEF01 KORONTHÁLYOVÁ, Olga - MATIAŠOVSKÝ, Peter. Pore Structure and Thermal Conductivity of Burnt Clay Bricks. In Thermophysics 2007 : proceedings. Editor J. Leja. - Bratislava : Vydavateľstvo STU, 2007, p. 100-106. ISBN 978-80-227-27465-4.

**Citácie:**

1. [1.1] AOUBA, L. - BORIES, C. - COUTAND, M. - PERRIN, B. - LEMERCIER, H. *Properties of fired clay bricks with incorporated biomasses: Cases of Olive Stone Flour and Wheat Straw residues. In CONSTRUCTION AND BUILDING MATERIALS. ISSN 0950-0618, 2016, vol. 102, p. 7-13., WOS*

**AFC Publikované príspevky na zahraničných vedeckých konferenciách**

AFC01 DARULA, Stanislav - KITTLER, Richard. CIE General Sky standard defining luminance distributions. In Proceeding Conference eSim 2002. The Canadian conference on building energy simulation : september 11th - 13th, 2002, Montreal. Dostupné na internete: <[http://www.ustarch.sav.sk/wp-content/uploads/darula\\_kittler\\_proc\\_conf\\_esim\\_2002.pdf](http://www.ustarch.sav.sk/wp-content/uploads/darula_kittler_proc_conf_esim_2002.pdf)>.

**Citácie:**

1. [1.1] HOU, T. - ZHENG, B. - XU, Z. - YANG, Y. - CHEN, Y. - GUO, Y. *Simplification of leaf surfaces from scanned data: Effects of two algorithms on leaf morphology. In COMPUTERS AND ELECTRONICS IN AGRICULTURE. ISSN 0168-1699, 2016, vol. 121, p. 393-403., WOS*
2. [1.1] SOKOL, N. - MARTYNIUK-PECZEK, J. *An incorporation of contemporary daylight assessment methods into architecture and urban planning of residential areas in Poland. In PROCEEDINGS OF 2016 IEEE LIGHTING CONFERENCE OF THE VISEGRAD COUNTRIES (LUMEN V4), 2016., WOS*
3. [1.1] SUN, C. - GILES, H. - LIAN, Z. *Parametric regression model for lighting calibration. In INDOOR AND BUILT ENVIRONMENT. ISSN 1420-326X, 2016, vol. 25, no. 2, p. 407-423., WOS*
4. [1.1] VAZIFEH, E. - SCHUSS, M. - MANDAVI, A. *Radiometric boundary condition models for building performance simulation: an empirical assessment. In 6TH INTERNATIONAL BUILDING PHYSICS CONFERENCE (IBPC 2015). ISSN 1876-6102, 2015, vol. 78, p. 1775-1780., WOS*
5. [1.1] WEHRWEIN, S. - BALA, K. - SNAVELY, N. *Shadow Detection and Sun Direction in Photo Collections. In 2015 INTERNATIONAL CONFERENCE ON 3D VISION, 2015, p. 460-468., WOS*
6. [3.1] MUKHERJEE, S. *An approach to predict daylight glare using Nazzal's daylight glare index formula. In INTERNATIONAL JOURNAL OF ENGINEERING RESEARCH AND DEVELOPMENT. ISSN 2278-800X, 2016, vol. 12, no. 10, p. 50-58.*

7. [3.1] PIOTROWSKA, E. Modelowanie natężenia oświetlenia dziennego w programie DIALux (Models illuminance distribution in DIALux). In POZNAN UNIVERSITY OF TECHNOLOGY ACADEMIC JOURNALS. ELECTRICAL ENGINEERING. ISSN 1897-0737, 2016, no. 88, p. 325-335.
  8. [3.1] WACHTER, M. - GOTTSCHALK, L. - SIMMLER, M. - SCHULZE, A. - BECKER, F. - SAYALA, M. - HÜTTL, B. Short circuit current measurements at clear-sky conditions on photovoltaic modules: Basic for a reliable self-reference algorithm. In proceedings of the 32nd European Photovoltaic Solar Energy Conference and Exhibition (EU PVSEC 2016). Editors M. Topic, P. Helm, N. Taylor. – New York: Curran Associates, Inc., 2016, p. from 2212, ISBN 978-1-5108-3651-8.
- AFC02 JANOTKA, Ivan - KRAJČI, Ľudovít. Utilization of natural zeolite in portland pozzolan cement of increased sulfate resistance. In Proceedings of the 5th CANMET/ACI International Conference on Durability of Concrete. - Barcelona, 2000, vol. 1, P. 223-236.
- Citácie:
1. [1.1] GIRSKAS, G. - SKRIPKIUNAS, G. - SAHMENKO, G. - KORJAKINS, A. Durability of concrete containing synthetic zeolite from aluminum fluoride production waste as a supplementary cementitious material. In CONSTRUCTION AND BUILDING MATERIALS. ISSN 0950-0618, 2016, vol. 117, p. 99-106., WOS
- AFC03 KITTLER, Richard - PEREZ, Richard - DARULA, Stanislav. A new generation of sky standard. In Proceedings of the Lux Europa Conference. - Amsterdam, 1997, p. 359-373.
- Citácie:
1. [1.1] AL-SALLAL, K. A. Daylighting. In LOW ENERGY LOW CARBON ARCHITECTURE: RECENT ADVANCES & FUTURE DIRECTIONS. ISSN 2164-0645, 2016, vol. 12, p. 63-97., WOS
- AFC04 KITTLER, Richard - DARULA, Stanislav. A catalogue of fifteen sky luminance patterns between the CIE standard skies. In Proceedings : 24th Session of the CIE. - Warsaw : CIE, 1999, p. 7-9. ISBN 3-900-734-93-3.(24th Session of the CIE).
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1. [3.1] MUKHERJEE, S. An approach to predict daylight glare using nazzal's daylight glare index formula. In INTERNATIONAL JOURNAL OF ENGINEERING RESEARCH AND DEVELOPMENT. ISSN 2278-800X, 2016, vol. 12, no. 10, p. 50-58.
- AFC05 MORAVČÍKOVÁ, Henrieta. Concentrated responses to the issue of prefabricated mass housing ensembles, Bratislava, 1950-1995. In Mass housing East-West : international conference proceedings. - Edinburgh : EAHN, DOCOMOMO International, Edinburgh College of Art / University of Edinburgh, 2012. Dostupné na internete:  
<<http://sites.ace.ed.ac.uk/docomomoiscul/publications/e-proceedings-4/>>.
- Citácie:
1. [1.1] MONCLUS, J. - DIEZ MEDINA, C. Modernist housing estates in European cities of the Western and Eastern Blocs. In PLANNING PERSPECTIVES. ISSN 0266-5433, 2016, vol. 31, no. 4, p. 533-562., WOS
- AFC06 SZALAY, Peter. New practice? On the Preprocess of Preservation of Peter Behrens's synagogue in Žilina. In Adaptive reuse, the modern movement towards the future : 14th international conference proceedings. Eds. Ana Tostoes, Zara Ferreira. - Lisabon : DOCOMOMO International, Casa da Arquitectura, 2016, p. 871-877. ISBN 978-989-99645-0-1.
- Citácie:
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#### **AFG Abstrakty príspevkov zo zahraničných konferencií**

- AFG01      MIKULA, Marian - GRANČIČ, B. - BURŠÍKOVÁ, Vilma - CSUBA, Adrian - DRŽÍK, Milan - PLECENIK, Andrej - KÚŠ, P. Mechanical properties of superhard TiB<sub>2</sub> coatings prepared by DC magnetron sputtering. In Czech Vacuum Society. Joint Vacuum Conference and Inelastic Mean Free Path Workshop : programme and book of abstracts. - Prague : Czech Vacuum Society, 2006.

*Citácie:*

1. [1.1] *MALINOVSKIS, Paulius - PALISAITIS, Justinas - PERSSON, Per O. A. - LEWIN, Erik - JANSSON, Ulf. Synthesis and characterization of MoB<sub>2</sub>-x thin films grown by nonreactive DC magnetron sputtering. In JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A. ISSN 0734-2101, 2016, vol. 34, no. 3, pp., WOS*
2. [1.1] *NEDFORS, Nils - MOCKUTE, Aurelija - PALISAITIS, Justinas - PERSSON, Per O. A. - NASLUND, Lars-Ake - ROSEN, Johanna. Influence of pulse frequency and bias on microstructure and mechanical properties of TiB<sub>2</sub> coatings deposited by high power impulse magnetron sputtering. In SURFACE & COATINGS TECHNOLOGY. ISSN 0257-8972, 2016, vol. 304, no., pp. 203-210., WOS*
3. [1.1] *TENGDELIUS, Lina - BROITMAN, Esteban - LU, Jun - ERIKSSON, Fredrik - BIRCH, Jens - NYBERG, Tomas - HULTMAN, Lars - HOGBERG, Hans. Hard and elastic epitaxial ZrB<sub>2</sub> thin films on Al<sub>2</sub>O<sub>3</sub>(0001) substrates deposited by magnetron sputtering from a ZrB<sub>2</sub> compound target. In ACTA MATERIALIA. ISSN 1359-6454, 2016, vol. 111, no., pp. 166-172., WOS*

#### **AGI Správy o vyriešených vedeckovýskumných úlohách**

- AGI01      KITTLER, Richard - DARULA, Stanislav - PEREZ, Richard. A set of standard skies characterising daylight conditions for computer and energy conscious design. U.S. – Slovak Science and technology Cooperation 1991-1998 : Final Report. American-Slovak Grant Project US-SK 92052. Bratislava : ICA SAS, 1998. 240 p.

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1. [1.1] *NAIR, M. G. - RAMAMURTHY, K. - GANESAN, A. R. Design of an anidolic concentrator and evaluation of daylight enhancement under an overcast sky. In LIGHTING RESEARCH & TECHNOLOGY. ISSN 1477-1535, 2016, vol. 48, no. 8, p. 917-929., WOS*
2. [1.1] *VAZIFEH, E. - SCHUSS, M. - MANDAVI, A. Radiometric boundary condition models for building performance simulation: an empirical assessment. In 6TH INTERNATIONAL BUILDING PHYSICS CONFERENCE (IBPC 2015). ISSN 1876-6102, 2015, vol. 78, p. 1775-1780., WOS*

#### **BAA Odborné knižné publikácie vydané v zahraničných vydavateľstvách**

- BAA01      DARULA, Stanislav - KITTLER, Richard - KOCIFAJ, Miroslav - PLCH, Jiří - MOHELNÍKOVÁ, Jitka - VAJKAY, František. Osvětlování světlovody. Praha : Grada, 2009. 160 s. ISBN 978-80-247-2459-1.

*Citácie:*

1. [1.2] *NOVÁK, T. - BOS, P. - ŠUMPICH, J. - SOKANSKÝ, K. Statistical evaluation of dimmable interior lighting system consumption using daylight. In*



*Advances in Intelligent Systems and Computing. ISSN 21945357, 2016, vol. 423, p. 171-180., SCOPUS*

## **BAB Odborné knižné publikácie vydané v domácich vydavateľstvách**

**BAB01**     KITTLER, Richard - DARULA, Stanislav - PEREZ, Richard. A set of standard skies characterising daylight conditions for computer and energy conscious design. Bratislava : Polygrafia SAV, 1998. 52 p.

Citácie:

1. [1.1] ALSHAIBANI, K. A. The use of horizontal sky illuminance to classify the CIE Standard General Skies. In *LIGHTING RESEARCH & TECHNOLOGY. ISSN 1477-1535, 2016, vol. 48, no. 8, p. 1034-1041., WOS*
2. [1.1] ALSHAIBANI, K. Average daylight factor for the ISO/CIE Standard General Sky. In *LIGHTING RESEARCH & TECHNOLOGY. ISSN 1477-1535, 2016, vol. 48, no. 6, p. 742-754., WOS*
3. [1.1] KOMAR, L. Calibration of the artificial sky using fisheye images. In *PROCEEDINGS OF 2016 IEEE LIGHTING CONFERENCE OF THE VISEGRAD COUNTRIES (LUMEN V4), 2016., WOS*
4. [1.1] LI, D. H. W. - LI, C. - LOU, S. W. - TSANG, E. K. W. - LAM, J. C. Analysis of vertical sky components under various CIE standard general skies. In *INDOOR AND BUILT ENVIRONMENT. ISSN 1420-326X, 2016, vol. 25, no. 4, p. 703-711., WOS*
5. [1.1] LI, Danny H. W. - LOU, S. - LAM, J. C. - WU, Ronald H. T. Determining solar irradiance on inclined planes from classified CIE (International Commission on Illumination) standard skies. In *ENERGY. ISSN 0360-5442, 2016, vol. 101, p. 462-470., WOS*
6. [1.1] LOU, S. - LI, D. H. W. - LAM, J. C. Hong Kong CIE sky classification and prediction by accessible weather data and trees-based methods. In *2016 INTERNATIONAL CONFERENCE ON NEW ENERGY AND FUTURE ENERGY SYSTEM (NEFES 2016). ISSN 1755-1307, 2016, vol. 40, article number UNSP 012018., WOS*
7. [1.1] LOU, S. - LI, Danny H. W. - LAM, Joseph C. - LEE, Eric W. M. Estimation of obstructed vertical solar irradiation under the 15 CIE Standard Skies. In *BUILDING AND ENVIRONMENT. ISSN 0360-1323, 2016, vol. 103, p. 123-133., WOS*
8. [1.1] SOUZA, D. F. - SCARAZZATO, P. S. - PEDRINI, H. Classifying skies from images: A multidimensional approach to detecting high dynamic range imaging attributes. In *LIGHTING RESEARCH & TECHNOLOGY. ISSN 1477-1535, 2016, vol. 48, no. 5, p. 559-572., WOS*
9. [1.2] SERGEYCHUK, O. - RADOMTSEV, D. Implementation of CIE general sky model approach in Ukraine and effects on room illuminance mode. In *International Journal of Smart Home. ISSN 19754094, 2016, vol. 10, no. 1, p. 57-70., SCOPUS*
10. [3.1] KAŇKA, J. Alfa a omega normalizace denního osvětlení. In *SVĚTLO. ISSN 1212-0812, 2016, vol. 19, no. 6, p. 40-41. Dostupné na internete: [http://www.odbornecasopisy.cz/flipviewer/Svetlo/2016/06/Svetlo\\_06\\_2016/index.html#p=41](http://www.odbornecasopisy.cz/flipviewer/Svetlo/2016/06/Svetlo_06_2016/index.html#p=41).*
11. [3.1] RADOMTSEV, D.O. – SERGEYCHUK, O.V. Modeling of sky conditions for the territory of Ukraine according to DSTU ISO 15469:2008 «Spatial distribution of daylight». In *VESTNIK CHERSONSKOGO NACIONALNOGO TECHNICESKOGO UNIVERSITETA. ISSN 2078-4481, 2015, vol. 54, no. 3, p. 604-609.*

### **BDCA Odborné práce v zahraničných karentovaných časopisoch impaktovaných**

- BDCA01      KOCIFAJ, Miroslav - AUBÉ, Martin. Editorial: Special issue on light pollution. In *Lighting Research and Technology*, 2014, vol. 46, no. 3, dOI: 10.1177/1477153513517986. (1.485 - IF2013). (2014 - Current Contents). ISSN 1477-1535.

Citácie:

1. [1.2] *KRUPIŃSKI, R. Designing and floodlighting of objects by the luminance distribution projecting. In Przegląd Elektrotechniczny. ISSN 00332097, 2016 , vol.92, iss.12, p. 302-305., SCOPUS*

### **\*BDFB Odborné práce v domácich nekarentovaných časopisoch neimpaktovaných**

- BDFB01      HABERLANDOVÁ, Katarína. Jedinečný príklad aplikácie moderných rámových konštrukcií v Bratislave (Zimný prístav: sklad č. 7) = The unique example of the application of framework constructions in Bratislava (Winter Harbour: storage No.). In *Architektúra & urbanizmus : časopis pre teóriu architektúry a urbanizmu*, 2006, roč. XL, č. 3-4, s. 189-213.

Citácie:

1. [1.1] *MACKOVICOVA, K. - KRÁL'OVA, E. Potentials and values of industrial heritage on the example winter harbour in Bratislava. In SGEM 2016, BK 4: ARTS, PERFORMING ARTS, ARCHITECTURE AND DESIGN CONFERENCE PROCEEDINGS, VOL II. ISSN 2367-5659, 2016, p. 501-507., WOS*

### **BEE Odborné práce v zahraničných zborníkoch (konferenčných aj nekonferenčných, recenzovaných a nerecenzovaných)**

- BEE01      HANULIAK, Peter - HARTMAN, Peter - DARULA, Stanislav - HOBLÍKOVÁ, Renáta. Spektrálny odraz svetla "Fotometrického náteru". In *Kurz osvětlovací techniky XXXI : sborník odborného semináře*, s. 78-81.

Citácie:

1. [1.1] *KOMAR, L. Calibration of the artificial sky using fisheye images. In PROCEEDINGS OF 2016 IEEE LIGHTING CONFERENCE OF THE VISEGRAD COUNTRIES (LUMEN V4), 2016., WOS*

## ***Príloha D***

### **Údaje o pedagogickej činnosti organizácie**

#### Semestrálne prednášky:

Ing. Peter Matiašovský, CSc.

Názov semestr. predmetu: Metodológia vedeckého experimentu

Počet hodín za semester: 4

Názov katedry a vysokej školy: Stavebná fakulta STU, Katedra konštrukcií pozemných stavieb

prof. Dr. Ing. arch. Henrieta Moravčíková

Názov semestr. predmetu: Dejiny architektúry IV

Počet hodín za semester: 10

Názov katedry a vysokej školy: Fakulta architektúry STU, Ústav dejín a teórie architektúry a obnovy pamiatok

prof. Dr. Ing. arch. Henrieta Moravčíková

Názov semestr. predmetu: Trendy súčasnej architektúry

Počet hodín za semester: 10

Názov katedry a vysokej školy: Fakulta architektúry STU, Ústav dejín a teórie architektúry a obnovy pamiatok

Prof.Dr.Ing. Martin-Tchingnabé Palou

Názov semestr. predmetu: Priemyselná anorganická chémia

Počet hodín za semester: 12

Názov katedry a vysokej školy: Fakulta chemickej a potravinárskej technológie STU, Ústav anorganickej chémie, technológie a materiálov

Prof.Dr.Ing. Martin-Tchingnabé Palou

Názov semestr. predmetu: Špeciálna technológia anorganických materiálov

Počet hodín za semester: 12

Názov katedry a vysokej školy: Fakulta chemickej a potravinárskej technológie STU, Ústav anorganickej chémie, technológie a materiálov

#### Semestrálne cvičenia:

Ing. Eva Kuzielová, PhD.

Názov semestr. predmetu: Laboratórium chemických technológií II

Počet hodín za semester: 12

Názov katedry a vysokej školy: Slovenská technická univerzita v Bratislave, Oddelenie anorganických materiálov

Ing. Eva Kuzielová, PhD.

Názov semestr. predmetu: Špecializované laboratórne cvičenia

Počet hodín za semester: 15

Názov katedry a vysokej školy: Slovenská technická univerzita v Bratislave, Oddelenie anorganických materiálov

Ing. Peter Matiašovský, CSc.

Názov semestr. predmetu: Metodológia vedeckého experimentu

Počet hodín za semester: 20

Názov katedry a vysokej školy: Stavebná fakulta STU, Katedra konštrukcií pozemných stavieb

Semináre:

Terénne cvičenia:

Individuálne prednášky:

Prof.Dr.Ing. Martin-Tchingnabé Palou

Názov semestr. predmetu: Procesy a zariadenia silikátového priemyslu

Počet hodín za semester: 12

Názov katedry a vysokej školy: Fakulta chemickej a potravinárskej technológie STU, Ústav anorganickej chémie, technológie a materiálov

**Príloha E****Medzinárodná mobilita organizácie****(A) Vyslanie vedeckých pracovníkov do zahraničia na základe dohôd:**

| <b>Krajina</b>             | <b>D r u h d o h o d y</b> |                  |                        |                  |                        |                  |
|----------------------------|----------------------------|------------------|------------------------|------------------|------------------------|------------------|
|                            | <b>MAD, KD, VTS</b>        |                  | <b>Medziústavná</b>    |                  | <b>Ostatné</b>         |                  |
|                            | <b>Meno pracovníka</b>     | <b>Počet dní</b> | <b>Meno pracovníka</b> | <b>Počet dní</b> | <b>Meno pracovníka</b> | <b>Počet dní</b> |
| Dánsko                     |                            |                  |                        |                  | Stanislav Darula       | 6                |
| Nemecko                    |                            |                  |                        |                  | Stanislav Darula       | 3                |
| Rakúsko                    |                            |                  |                        |                  | Miroslav Kocifaj       | 1                |
| Taiwan                     | Ladislav Kómar             | 10               |                        |                  |                        |                  |
|                            | Peter Matiašovský          | 10               |                        |                  |                        |                  |
|                            | Peter Mihálka              | 10               |                        |                  |                        |                  |
| USA                        |                            |                  |                        |                  | Ján Sládek             | 33               |
| <b>Počet vyslaní spolu</b> | <b>3</b>                   | <b>30</b>        |                        |                  | <b>4</b>               | <b>43</b>        |

**(B) Prijatie vedeckých pracovníkov zo zahraničia na základe dohôd:**

| <b>Krajina</b>             | <b>D r u h d o h o d y</b> |                  |                        |                  |                                |                  |
|----------------------------|----------------------------|------------------|------------------------|------------------|--------------------------------|------------------|
|                            | <b>MAD, KD, VTS</b>        |                  | <b>Medziústavná</b>    |                  | <b>Ostatné</b>                 |                  |
|                            | <b>Meno pracovníka</b>     | <b>Počet dní</b> | <b>Meno pracovníka</b> | <b>Počet dní</b> | <b>Meno pracovníka</b>         | <b>Počet dní</b> |
| Mexiko                     |                            |                  |                        |                  | Héctor Antonio Solano Lamphar  | 28               |
|                            |                            |                  |                        |                  | José Manuel Ramírez Bernardino | 21               |
| Taiwan                     | Chia-Wang Yu               | 9                |                        |                  |                                |                  |
|                            | Pin-Feng Liu               | 9                |                        |                  |                                |                  |
| <b>Počet prijatí spolu</b> | <b>2</b>                   | <b>18</b>        |                        |                  | <b>2</b>                       | <b>49</b>        |

**(C) Účasť pracovníkov pracoviska na konferenciách v zahraničí (nezahrnutých v "A"):**

| <b>Krajina</b> | <b>Názov konferencie</b> | <b>Meno pracovníka</b>  | <b>Počet dní</b> |
|----------------|--------------------------|-------------------------|------------------|
| Česko          | CM 2017                  | Miroslav Repka          | 3                |
|                |                          | Ladislav Sátor          | 3                |
|                | EM 2017                  | Jozef Kriváček          | 4                |
|                | FCC 2017                 | Martin-Tchingnabé Palou | 3                |

|                |               |                         |            |
|----------------|---------------|-------------------------|------------|
|                | IC 2017       | Martin-Tchingnabé Palou | 2          |
|                | ICBM          | Janette Dragomirová     | 2          |
|                |               | Eva Kuzielová           | 2          |
|                |               | Martin-Tchingnabé Palou | 2          |
|                |               | Matúš Žemlička          | 2          |
|                | ID MSC        | Jozef Kriváček          | 4          |
|                | KC 2017       | Martin-Tchingnabé Palou | 2          |
|                | Kurz          | Stanislav Darula        | 3          |
|                |               | Ladislav Kómar          | 3          |
|                |               | Jaromír Petržala        | 3          |
|                | NTCC 2017     | Eva Kuzielová           | 3          |
|                |               | Martin-Tchingnabé Palou | 3          |
|                | SSBK          | Martin Križma           | 1          |
|                | TAS 2017      | Martin-Tchingnabé Palou | 2          |
| Francúzsko     | BM A          | Henrieta Moravčíková    | 4          |
|                | ICCS20        | Miroslav Repka          | 6          |
|                |               | Vladimír Sládek         | 6          |
| Grécko         | ICF 14        | Ján Sládek              | 7          |
| Chorvátsko     | ICSID 2017    | Ján Sládek              | 6          |
| Maďarsko       | JTACC-V4      | Marta Kuliffayová       | 3          |
|                |               | Eva Kuzielová           | 3          |
|                |               | Martin-Tchingnabé Palou | 3          |
| Nórsko         | NSB           | Matúš Holúbek           | 4          |
| Poľsko         | KomPlasTech   | Ján Sládek              | 3          |
| Portugalsko    | ICCES 2017    | Ján Sládek              | 7          |
|                |               | Vladimír Sládek         | 7          |
| Slovinsko      | DOCOMOMO      | Henrieta Moravčíková    | 3          |
|                | Lux           | Stanislav Darula        | 3          |
|                |               | Miroslav Kocifaj        | 4          |
|                |               | Ladislav Kómar          | 4          |
|                |               | Jaromír Petržala        | 4          |
| Srbsko         | AW            | Peter Szalay            | 3          |
|                | NA            | Henrieta Moravčíková    | 4          |
| Španielsko     | LPTMM         | Ladislav Kómar          | 5          |
| Taliansko      | FDM16         | Ján Sládek              | 5          |
|                | MA            | Laura Pastoreková       | 4          |
|                | MECHCOMP 2017 | Ladislav Sátor          | 7          |
| Veľká Británia | BEM/MRM       | Vladimír Sládek         | 4          |
| <b>Spolu</b>   | <b>28</b>     | <b>42</b>               | <b>156</b> |

Vysvetlivky: MAD - medziakademické dohody, KD - kultúrne dohody, VTS - vedecko-technická spolupráca v rámci vládnych dohôd

Skratky použité v tabuľke C:



AW - Architecture week  
BEM/MRM - International Conference on Boundary Elements and other Mesh Reduction Methods  
BM A - BigMat award  
CM 2017 - Conference with International Participation on Computational Mechanics  
DOCOMOMO - Documentation and Conservation of Buildings, Sites and Neighbourhoods of the Modern Movement Conference  
EM 2017 - Engineering Mechanics Conference 2017  
FCC 2017 - Fibre Concrete Conference 2017  
FDM16 - Advances in Fracture and Damage Mechanics XVI  
IC 2017 - International Committee on Irradiated Concrete 2017  
ICBM - 16th International Conference Binders and Materials 2017  
ICCES 2017 - International Conference on Computational and Experimental Engineering & Sciences  
ICCS20 - International Conference on Composite Structures  
ICF 14 - 14th International Conference on Fracture  
ICSID 2017 - International Conference on Structural Integrity and Durability  
ID MSC - Info Dny MSC Software 2017  
JTACC-V4 - The 1st Journal of Thermal Analysis and Calorimetry Conference and 6th V4 (Joint Czech-Hungarian-Polish-Slovakian) Thermoanalytical Conference  
KC 2017 - XI. ročník odborného semináře Kvalita cementu 2017  
KomPlasTech - XXIV Conference on Computer Methods in Metals Technology  
Kurz - Kurz osvětlovací techniky 2017  
LPTMM - Light pollution, theory, modeling and measurement  
Lux - Konferencia Lux Europa 2017  
MA - Military architecture  
MECHCOMP 2017 - International Conference on Mechanics of Composites  
NA - Night of architecture  
NSB - 11th Nordic Symposium on Building Physics  
NTCC 2017 - 6th Non-Traditional Cement and Concrete Conference  
SSBK - Seminár Sanace betonových konstrukci  
TAS 2017 - Termoanalytický seminář 2017

**Príloha F****Vedecko-popularizačná činnosť pracovníkov organizácie SAV**

| <b>Meno</b>                               | <b>Spoluautori</b>                     | <b>Typ<sup>1</sup></b> | <b>Názov</b>  | <b>Miesto zverejnenia</b>           | <b>Dátum alebo počet za rok</b> |
|---|--|------------------------|---|-------------------------------------|---------------------------------|
| Ing. Stanislav Darula, CSc.               |  | PB                     | AMI za Vami   | Banská Bystrica                     | 26.4.2017                       |
| Ing. Stanislav Darula, CSc.               |  | PB                     | Ami za Vami   | Košice                              | 16.5.2017                       |
| Ing. Stanislav Darula, CSc.               |  | PB                     | SZE   | Bratislava                          | 11.7.2017                       |
| Mgr. Miroslav Kocifaj, PhD.               | Hector Solano, Manuel Ramirez (Mexiko) | PB                     | 1. seminár: Light pollution in urban studies and planning                               | Bratislava                          | 3.10.2017                       |
| Ing. Jozef Kriváček, CSc.                 |  | PB                     | 2. seminár: Minimálna odolnosť tenkostenných konštrukcií pri výskyte stabilitných javov | Bratislava                          | 14.11.2017                      |
| Ing. Jozef Kriváček, CSc.                 | P. Matiašovský, M. Križma, M. T. Palou | EX                     | Deň otvorených dverí  | TVT 2017                            | 8.11.2017                       |
| prof. Dr. Ing. arch. Henrieta Moravčíková |  | PB                     | Arch-A-days 2017  | Galéria Arch-A, Banská Štiavnica    | 5.8.2017                        |
| prof. Dr. Ing. arch. Henrieta Moravčíková |  | PB                     | Architekt Friedrich Weinwurm  | ŽNO, Bratislava                     | 10.5.2017                       |
| prof. Dr. Ing. arch. Henrieta Moravčíková |  | PB                     | Architektúra & Urbanizmus 50 rokov časopisu   | Artforum, Bratislava                | 9.3.2017                        |
| prof. Dr. Ing. arch. Henrieta Moravčíková |  | PB                     | Architektúra & Urbanizmus 50 rokov časopisu   | Galéria Praha, Brno                 | 8.2.2017                        |
| prof. Dr. Ing. arch. Henrieta Moravčíková |  | PB                     | DOCOMOMO a moderné pamiatky na Slovensku  | T3 Kultúrny prostriedok, Bratislava | 14.12.2017                      |
| prof. Dr. Ing. arch. Henrieta Moravčíková |  | PB                     | Prvé dámy slovenskej architektúry   | Klarisky, Bratislava                | 29.5.2017                       |
| prof. Dr. Ing. arch. Henrieta Moravčíková |  | TL                     | Rozhovor  | Magazín Pravdy                      | 5.1.2017                        |
| prof. Dr. Ing. arch. Henrieta Moravčíková |  | PB                     | Super škola   | ZŠ Gessayova, Bratislava            | 10.4.2017                       |
| prof. Dr. Ing. arch. Henrieta Moravčíková |  | PB                     | Super škola   | ZŠ Tupolevova, Bratislava           | 10.4.2017                       |
| prof. Dr. Ing. arch. Henrieta             |  | PB                     | Super škola   | ZŠ Turnianska, Bratislava           | 10.4.2017                       |

|                              |                         |     |   |  |            |
|------------------------------|-------------------------|-----|---|--|------------|
| Moravčíková                  |                         |     |   |  |            |
| Ing. Ladislav Sátor,<br>PhD. |                         | PB  | Počítačové<br>modelovanie a<br>simulácia v<br>mechatronike  | SPŠ Komárno  | 17.2.2017  |
| Mgr. Peter Szalay,<br>PhD.   |                         | TL  | Esej: 10 stavieb, ktoré<br>v dobrom či zlom<br>minulý rok zmenili<br>Slovensko  | <a href="https://dennikn.sk/909432/10-stavieb-ktore-v-dobrom-ci-zlom-minuly-rok-zmenili-slovensko/">https://dennikn.sk/909432/10-stavieb-ktore-v-dobrom-ci-zlom-minuly-rok-zmenili-slovensko/</a>  | 13.10.2017 |
| Mgr. Peter Szalay,<br>PhD.   |                         | EX  | Exkurzia pre<br>zamestnancov<br>výskumníkov NPU ČR  | Bratislava   | 8.5.2017   |
| Mgr. Peter Szalay,<br>PhD.   |                         | RO  | Rozhovor o projekte<br>Ilkony v programe<br>Triaška and Čejka_fm  | RTVS, Rádio FM,<br><a href="https://www.mixcloud.com/radiofm/triaska-acejka_fm-1152017/?utm_campaign=notification_new_upload&amp;utm_medium=email&amp;utm_source=notification">https://www.mixcloud.com/radiofm/triaska-acejka_fm-1152017/?utm_campaign=notification_new_upload&amp;utm_medium=email&amp;utm_source=notification</a> | 11.5.2017  |
| Mgr. Peter Szalay,<br>PhD.   | Henrieta<br>Moravčíková | TL  | Rozhovor: Úľavy pre<br>developerov nabúrajú<br>demokraciu na úrovni<br>mesta, tvrdia architekti<br>SAV  | Denník N<br><a href="https://dennikn.sk/967272/ulavy-pre-developerov-naburaju-demokraciu-na-urovni-mesta-tvrdia-architekti-sav/">https://dennikn.sk/967272/ulavy-pre-developerov-naburaju-demokraciu-na-urovni-mesta-tvrdia-architekti-sav/</a>  | 8.12.2017  |
| Mgr. Peter Szalay,<br>PhD.   | Henrieta<br>Moravčíková | PB  | SOARÉ o modernej<br>architektúre Bratislavy   | Bratislava, Stará<br>tržnica   | 27.11.2017 |
| Mgr. Peter Szalay,<br>PhD.   | Martin Piaček           | PB  | Peter Szalay, Martin<br>Piaček. Diskusia o<br>prístupoch k histórii v<br>postfaktuálnej dobe, v<br>rámci výstavy<br>Pracovná výstava,<br>Nová synagóga Žilina | Žilina, Nová<br>synagóga   | 10.6.2017  |
| Mgr. Peter Szalay,<br>PhD.   | Martin Zaiček           | EX  | Komentovaná<br>prehliadka<br>architektúrou<br>Výstaviska Incheba<br>pre SNG   | Bratislava   | 13.6.2017  |
| Mgr. Peter Szalay,<br>PhD.   | Martin Zaiček           | iné | Výstava Vladimír<br>Dedeček Práce -<br>Ostrava  | Ostrava, Industrial<br>gallery   | 1.5.2017   |

<sup>1</sup> PB - prednáška/beseda, TL - tlač, TV - televízia, RO - rozhlas, IN - internet, EX - exkurzia, PU - publikácia, MM - multimédia, DO - dokumentárny film