

Curriculum vitae

Mgr. Pavol Schwartz, Ph.D.



Date and place of birth: November the 6, 1974 in Poprad, Slovak Republic

Citizenship: Slovak Republic

Nationality: Slovak

Mother tongue: Slovak

Education and career summary:

- 1993 – 1998 studies at the Faculty of mathematics, physics and informatics, Comenius University in Bratislava, specialization: physics
- 1998 graduation at the Faculty of mathematics, physics and informatics, Comenius University in Bratislava, specialization: astronomy and astrophysics
- 1998 – 2001 post-graduate studies at the Solar department of Astronomical Institute of the Slovak Academy of Sciences in Tatranská Lomnica, Slovak Republic – preparation of the PhD. thesis, solar observations at the Lomnický Peak Observatory, Slovakia and development of the software for reduction and archiving of the observed data
- 2001 – 2002 compulsory military service in duration of 9 months
- 2002 – 2003 staff member at the Stellar department of Astronomical Institute of the Slovak Academy of Science, Tatranská Lomnica, Slovak Republic – photoelectric photometry of variable and chemically peculiar stars, development of software for data reduction obtained during special observations
- 2003 PhD. in astrophysics at the Faculty of mathematics, physics and informatics, Comenius University in Bratislava
- 2003 – 2007 post-doc position at the Solar department of Astronomical Institute of Academy of Sciences of the Czech Republic;
field of research: development of the software for reduction and co-alignment of data obtained by observations of the Sun from ground and space and their subsequent numerical interpretation

2008 – 2010 young scientist at the Solar department of Astronomical Institute of Academy of Sciences of the Czech Republic;
field of research: continuation with development of the software for reduction and interpretation of solar observations; managing (PI) of a scientific project devoted to this topic

from 2010 up to date senior scientist at the Solar department of Astronomical Institute of the Slovak Academy of Sciences – planing of observations of the Sun and acquisition of the spectroscopic and spectropolarimetric data, reduction and numerical interpretation of the observed data, preparation of numerical codes intended for this purpose, management (PI) of international scientific projects. Close collaboration with scientific group at the Solar Department of Astronomical Inst. of Academy of Sciences of the Czech Republic in the field of theoretical astrophysics and numerical simulations. I was also member of several international scientific projects there during this period.

Scientific stays abroad except stays made in the frame of bilateral projects

Many short term (up to three months) stays especially at Astronomical Institute of Academy of Sciences of the Czech Republic in Ondřejov (collaboration mainly with P. Heinzel and S. Gunár), Observatoire de Paris, Meudon, France (collaboration mainly with B. Schmieder), Max-Planck Institut fuer Sonnensystemforschung (collaboration mainly with C. Werner), Faculty of Natural Sciences, University of Ljubljana (collaboration with S. Ježič).

Knowledge of foreign languages:

foreign languages	UNDERSTANDING		SPEAKING		WRITTEN PRESENTATION
	Hearing	Reading	Oral interaction	Individual oral Presentation	
English	C ₂	C ₂	C ₂	C ₂	C ₁
Polish	B ₂	B ₂	B ₁	B ₁	A ₁
Russian	A ₂	B ₂	A ₂	A ₁	B ₁
German	B ₁	B ₁	A ₁	A ₁	A ₁
French	A ₁	B ₁	A ₁	A ₁	A ₁

Levels: A₁ and A₂: basic user - B₁ and B₂: individual user - C₁ and C₂: experienced user. According to the Common European reference frame for languages

Experiences connected with scientific work

Organisation of scientific symposia and management of research

- from 2012 up to date member of the Scientific Council of the Astronomical Institute of the Slovak Academy of sciences
- 2018 - 2021 – PI for the Slovak side of the bilateral project ‘Modelling of solar prominence fine structures using simultaneous SUMER and IRIS UV spectroscopy of hydrogen and magnesium lines’ solved in the frame of collaboration between Academy of Sciences of the Czech Republik and Slovak Academy of Sciences
- May 2017 – co-organazing the Spring School on Radiative Transfer, Astronomical Institue of Slovak Akedemy of Sciences, Tatranská Lomnica, Slovakia
- 2014 – 2015 – PI for the Slovak side of bilateral project ,The magnetic vector field in solar filaments‘ solved in the frame of collaboration between German Academic Exchange Service and Slovak Academy of Sciences
- 2009-2012 – PI of the scientific project ,Multi-spectral study of solar filaments and their EUV channels‘ of the Grant Agency of the Czech Republic
- Otober 2009 – co-organazing international scientific PROM workshop in Prague, Czech Republic

Experiences and knowledges connected with scientific work

- presentation of results of my research on international symposia and conferences
- internationally recognized expertize in astronomical instrumentation, especially for solar observations – asked for supports for acquisition of observational instruments, e.g., by Astronomical Institute of the University of Wroclaw for support for acquisition of new horizontal solar telescope for the Bialkow Observatory

Technical skills connected with scientific work

- from 2012 up to date observations with the coronagraphs and postfocal instruments COronal Multi-channel Polarimeter for Slovakia (COMP-S) and Solar Chromospheric Detector (SCD) mounted on them.
- reduction and interpretation of data obtained by ground based and space born solar instruments (as X-ray Telescope onboard the Hinode satellite, CDS and SUMER spectrographs onboard the SoHO satellite, Interface Region Imaging Spectrograph, etc., and Vacuum Tower Telescope and GREGOR on Tenerife, Solar Laboratory multi-camera Spectrograph at the Ondřejov Observatory, etc.) obtained during coordinated observing campaigns; organizing, planing and/or participating at these observing campaigns.
- advanced knowledge (basic administration) of UNIX-based operating systems (namely LINUX)
- programming in the languages FORTRAN99 and Image Data Language including the so-called graphic widgets, writing of sophisticated and flexible computer codes
- experience with parallel programming under the MPI environment in programming language FORTRAN
- knowledge of the text processor LATEX and ability of publishing articles or extended texts using this text processor
- creating and administration of the web pages, knowledge of html, css and basic knowledge of PHP language and Java script

Other abilities and skills:

- communicative, tenacious, and able to learn new things rather quickly mainly as for new programming languages or usage of a special software
- driving licence for personal cars (group B)
- preparation of musical scores using the LilyPond music notation editor

Overview of the research outputs

The five most significant research outputs:

Schwartz, P., Heinzl, P., Schmieder, B., Anzer, U., 2006, A&A 459, 651
 Heinzl, P. Schmieder, B., Fárník, F., Schwartz, P., Labrosse, N., et al. 2008, ApJ 686, 1383
Schwartz, P., Heinzl, P., Kotrč, P., Fárník, F., Kupryakov, Yu. A., DeLuca, E.E., Golub, L. 2015, A&A 574, id.A62
Schwartz, P., Jejíč, S., Heinzl, P., Anzer, U., Jibben, P.R. 2015, ApJ 807, article id. 97
Schwartz, P., Gunár, S., Jenkins, J.M., Long, D.M., Heinzl, P., Choudhary, D.P. 2019, A&A 631, id.A146

The five most significant research outputs over the last six years

Jejíč, S., Schwartz, P., Heinzl, P., Zapiór, M., Gunár, S., A&A 618, id.A88
Schwartz, P., Gunár, S., Jenkins, J.M., Long, D.M., Heinzl, P., Choudhary, D.P. 2019, A&A 631, id.A146
 Heinzl, P., Schwartz, P., Lörinčík, J., Koza, J., Jejíč, S., Kuridze, D. 2020, ApJL, 896, id.L35
 Gunár, S., Schwartz, P., Koza, J., Heinzl, P. 2020, A&A 644, id.A109
 Koza, J., Gunár, S., Schwartz, P., Heinzl, P., Liu, W. 2022, ApJ. Suppl. S. 261, id.17

Basic statistics of the research outputs and the corresponding citations (outside autocitations)

Overall/Over the last six years

Number of the research outputs: more than 59/17

Number of the research outputs registered in the Web of Science or Scopus databases: more than 27/10

Number of citations corresponding to the research outputs: more than 183/71

Number of citations registered in the Web of Science (except autocitations) or Scopus databases: more than 177/66