

Name: Pavel Denisenkov (Denissenkov)
Citizenship: Canadian
Languages: English (fluent), German (good), Russian (native)

Address: Department of Physics & Astronomy
University of Victoria
PO Box 1700, STN CSC
Victoria, BC, V8W 2Y2, CANADA

Phone: +1 (250) 721-8656
Fax: +1 (250) 721-7715
E-Mail: pavelden@uvic.ca
Website: <http://astrowww.phys.uvic.ca/~dpa/>

RESEARCH INTERESTS

the theory of stellar evolution and nucleosynthesis; rotation and mixing of low-mass stars (including the Sun) during their pre- and early main-sequence evolution, as well as on the red giant branch, horizontal branch, and asymptotic giant branch (AGB) (especially, in globular clusters); hot-bottom burning, mixing and s-process nucleosynthesis in AGB stars; interpretation of observed rotational and chemical anomalies in stars via modeling of hydrodynamic, magnetic, and thermohaline transport processes in their radiative zones, as well as via modeling of their tidal interaction and mass exchange in close binaries; the origin of abundance anomalies in the oldest stars in the Universe; 2D and 3D numerical simulations of MHD and thermohaline mixing processes in stars using spectral and finite element methods; modeling of thermonuclear runaways and nucleosynthesis in Novae

developed computer programs and relevant numerical techniques for the solution of networks of nucleosynthesis, chemical mixing and angular momentum transport equations coupled with the standard equations of stellar structure and evolution

EMPLOYMENT HISTORY

Jul/2009 – Research Associate (with Profs. Falk Herwig and Don Vandenberg):
Present Department of Physics & Astronomy, University of Victoria (Canada)

Jul/2005 – Postdoctoral Researcher (supervised by Prof. Marc Pinsonneault):
Jun/2008 Department of Astronomy, The Ohio State University (USA)

Jul/2004 – Research Associate (supervised by Prof. Brian Chaboyer):
Jun/2005 Department of Physics & Astronomy, Dartmouth College (USA)

Jul/2002 – Postdoctoral Fellow (supervised by Prof. Don Vandenberg):
Jun/2004 Department of Physics & Astronomy, University of Victoria (Canada)

- 2000 – Senior Research Associate: Sobolev Astronomical Institute,
2002 St. Petersburg State University (Russia)
- 1983 – Research Associate: Sobolev Astronomical Institute,
2000 St. Petersburg State University (Russia)
- Feb/1998 – Alexander von Humboldt Fellow: Max Planck Institute (MPI)
Jul/1998 for Astrophysics, Garching (Germany)
- Sep/1992 – Alexander von Humboldt Fellow: MPI for Astrophysics,
Feb/1994 Garching (Germany)

TEACHING EXPERIENCE

- 2011 – Sessional Instructor: Department of Physics & Astronomy,
Present University of Victoria (Canada)
taught the following courses:
classical electrodynamics, electromagnetic theory and stellar populations
- 1994 – Associate Professor: St. Petersburg State University (Russia)
2002
taught the following courses:
introduction to astronomy, stellar astrophysics, computational astrophysics,
theoretical physics (quantum mechanics, electrodynamics, thermodynamics and
statistical mechanics, plasma physics)
- supervised graduate students:*
Dr. Natalia Ivanova, she continued her PhD studies in Oxford University
and is now an assistant professor in the University of Alberta (Canada);
Mr. Ke Li in the Dartmouth College

ACADEMIC DEGREES AND AWARDS

- May/2002 Doctor of Science (Habilitation) in Astrophysics
St. Petersburg State University (Russia)
thesis title: *“Deep Mixing in Globular Cluster Red Giants”*
- Nov/1991 Alexander von Humboldt Fellowship (Germany)
- Oct/1990 PhD in Astrophysics
St. Petersburg State University (Russia)
thesis title: *“Study of Some Chemical Peculiarities in Stars on the Basis of
the Stellar Evolution Theory”*

EDUCATION

- 1986–1990 PhD Studies: St. Petersburg State University (Russia)

1983 M.S. in Astronomy (with honors): Faculty of Mathematics and Mechanics,
St. Petersburg State University (Russia)

SHORT-TERM RESEARCH APPOINTMENTS

Jun/2014, Sep/2003	Max Planck Institute (MPI) for Astrophysics, Garching, Germany
May–Jun/2004	Institute for Computational Astrophysics, St. Mary’s University, Halifax, Canada
Feb–Mar/2002	MPI for Extraterrestrial Physics, Garching, Germany
Sep–Dec/2001	Institute of Astronomy, Cambridge, UK
Mar–May/2001	MPI for Astrophysics, Garching, Germany
Jan–Mar/2001	MPI for Extraterrestrial Physics, Garching, Germany
Nov–Dec/2000	Monash University, Clayton, Australia
Feb–Mar/2000	MPI for Astrophysics, Garching, Germany
Mar/1999	MPI for Astrophysics, Garching, Germany
Jan–Apr/1999	Institute of Astronomy, Cambridge, UK
Aug/1998	MPI for Astrophysics, Garching, Germany
Mar–May/1997	Mount Stromlo and Siding Spring Observatories, Canberra, Australia
Jan–Feb/1997	MPI for Astrophysics, Garching, Germany
Jan–Mar/1996	MPI for Astrophysics, Garching, Germany
Jan–Feb/1995	MPI for Astrophysics, Garching, Germany
Mar–Apr/1994	MPI for Astrophysics, Garching, Germany

INVITED COLLOQUIUM TALKS

Oct/2007	Department of Astronomy & Astrophysics, UC Santa Cruz, USA
May/2007	High Altitude Observatory, Boulder, USA
Feb/2007	Department of Physics & Astronomy, St. Mary’s University, Canada
Mar/2006	CITA, Toronto, Canada
Apr/2005	Department of Astronomy, Boston University, USA
Apr/2005	Department of Astronomy, The Ohio State University, USA
May/2003	Department of Astronomy, University of Washington, Seattle, USA
Feb/2003	TRIUMF – Canada’s National Laboratory for Particle and Nuclear Physics, Vancouver, Canada
Apr/1999	Department of Astrophysics, Oxford University, UK

MEMBERSHIP

2001–2003	SOC of Joint Discussion #4 – Astrophysical Impact of Abundances in Globular Cluster Stars – in the IAU XXV General Assembly, Sydney, 16-17 July, 2003
2001 – present	IAU Working Group on Abundances in Red Giants
1997 – present	International Astronomical Union

SERVED AS A REFEREE FOR THE FOLLOWING JOURNALS:

Astronomy and Astrophysics

The Astronomical Journal
The Astrophysical Journal
Monthly Notices of the Royal Astronomical Society
Publications of the Astronomical Society of the Pacific

COLLABORATORS

Lars Bildsten (University of California, Santa Barbara, USA)
Brian Chaboyer (Dartmouth College, USA)
Corinne Charbonnel (Geneva Observatory, Switzerland)
Falk Herwig (University of Victoria, Canada)
Natalia Ivanova (University of Alberta, Canada)
Keith MacGregor (High Altitude Observatory, Boulder, CO, USA)
Bill Merryfield (CCCMA, University of Victoria)
John Norris (Mount Stromlo & Siding Spring Observatories, Canberra, Australia)
Marc Pinsonneault (The Ohio State University, USA)
Don Terndrup (The Ohio State University, USA)
Chris Tout (Institute of Astronomy, Cambridge, UK)
Jim Truran (Chicago University, USA)
Don VandenBerg (University of Victoria, Canada)
Achim Weiss (MPI for Astrophysics, Garching, Germany)

REFEREES

Name: Prof. Falk Herwig
Address: Department of Physics & Astronomy
University of Victoria
P.O. Box 3055 STN CSC
Victoria, BC, V8W 3P6 Canada
Phone: +1 (250) 721-7743; Fax: +1 (250) 721-7715
E-Mail: fherwig@uvic.ca

Name: Prof. Marc Pinsonneault
Address: Department of Astronomy, The Ohio State University
4055 McPherson Laboratory, 140 West 18th Avenue
Columbus, OH 43210-1173, USA
Phone: +1 (614) 292-5346; Fax: +1 (614) 292-2928
E-Mail: pinsono@astronomy.ohio-state.edu

Name: Prof. Don VandenBerg
Address: Department of Physics & Astronomy
University of Victoria
P.O. Box 3055 STN CSC
Victoria, BC, V8W 3P6 Canada
Phone: +1 (250) 721-7739; Fax: +1 (250) 721-7715
E-Mail: vandenbe@uvic.ca