

Curriculum Vitae

Dr Pavlo (Pasha) Ponomarenko

(20 June 2022)

Qualifications: *PhD in Radiophysics, 1995*, Kharkov State University, Ukraine
MSc in Radiophysics, 1984, Kharkov State University, Ukraine

Current positions: *SuperDARN Research Associate*

Institute of Space and Atmospheric Studies,
University of Saskatchewan, Saskatoon, Canada

Affiliations:

- *University of Saskatchewan, Canada – Associate Member, Department of Physics and Engineering Physics*
- *The University of Newcastle, Australia – Conjoint Lecturer*
- *Virginia Tech University, US – Adjunct Assistant Professor*

Committees etc.:

- *SuperDARN Data Analysis Working Group – Chair (2013-2019), core member (2019 - current)*
- *SuperDARN Elevation Calibration task force – core member (2017-2020)*

Employment history

2021/05-current *SuperDARN Research Associate*, Institute of Space and Atmospheric Studies, University of Saskatchewan Saskatoon, Canada

2018/11-2021/04 *Senior Analyst*, Research Computing, Academic and Research Technologies, University of Saskatchewan, Saskatoon, Canada

Programmer Analyst (casual), Institute of Space and Atmospheric Studies, University of Saskatchewan Saskatoon, Canada

2009/01 – 2018/11 *Professional Research Associate*, Institute of Space and Atmospheric Studies, University of Saskatchewan Saskatoon, Canada

Collaborators: *Prof J.-P. St.-Maurice, Prof G. Sofko, Prof A.Koustov*

2016/12-2017/03 *Designated Associate Professor*, Institute for Space-Earth Environmental Research (ISEE), University of Nagoya, Japan

Collaborators: *Dr Nozomu Nishitani and Dr Tomoaki Hori*

2014 (Sep-Dec) **Visiting Associate Professor**, Solar-Terrestrial Environment Laboratory (STELab), University of Nagoya, Japan

Collaborators: *Dr Nozomu Nishitani and Dr Tomo Hori*

1998-2009 **PostDoctoral Research Associate → Senior Research Associate**, Newcastle University, Newcastle, Australia

Collaborators: *Prof Brian Fraser, Dr Colin Waters, Dr Fred Menk*

1996-1997 **Guest Scientist**, Swedish Institute of Space Physics, Uppsala, Sweden

Collaborators: *Prof Bo Thide and Dr Thomas Leyser*

1988-1997 **Research Engineer, Research Assistant/Associate, Part-time PhD student**, Radio Astronomy Institute, Kharkov, Ukraine

Collaborators: *Prof Yuri Yampolski, Prof Vladimir Bezrodny, Dr Victor Sinitsyn,*

1986-1987 **Research Assistant, Laboratory Engineer**, Kharkov State University

Collaborators: *Prof Leonid Chernogor, Dr Ivan Kapanin*

1984-1986 **Army Service (Signal Officer-Radio Engineer)**, Lithuania

Research expertise:

Major area of interest:

Experimental and model studies of Solar Wind/Magnetosphere/Ionosphere interactions (SMI interactions, “Space Weather”)

Statistical characteristics of remote sensing signals in geophysical research

Studied phenomena:

Nature and characteristics of small-scale ionospheric turbulence

Interaction of HF radio waves with the ionospheric plasma

MHD wave generation and propagation in the near-Earth’s plasma

Research instrumentation and techniques:

Global network of research ionospheric HF radars, SuperDARN

Induction magnetometers at high latitudes (Antarctica)

Imaging riometers at high latitudes

Correlation and spectral analysis of large geophysical data sets

Development of original problem-specific data processing algorithms

Application of ray tracing to model ionospheric HF propagation

Simulation of HF radiowave interactions with ionospheric turbulence

Publications

- **Refereed papers: 51; conference presentations: 153**

Short-term collaborative visits

- **British Antarctic Survey, Cambridge, UK** (2002, 2006)
Collaborators: *Dr Mervyn Freeman, Dr Gareth Chisham, Prof Mike Pinnock*
- **Virginia Tech University, US** (2010, 2011, 2013)
Collaborators: *Prof Mike Ruohoniemi, Dr Jo Baker, Prof Ray Greenwald*
- **Leicester University, UK** (2002)
Collaborators: *Prof Tim Yeoman, Dr Darren Wright*
- **The University of Newcastle, Australia** (2012, 2018)
Collaborators: *Prof Colin Waters, Dr Murray Sciffer*
- **LaTrobe University, Australia** (a number of trips during 1998-2008)
Collaborators: *Prof Peter Dyson, Dr Murray Parkinson*
- **University of Otago & Antarctic New Zealand, NZ** -- annual summer trips to Scott Base, Antarctica, 2000-2008.

Refereeing

- Peer reviewer for *Geophysical Research Letters; Journal of Geophysical Research; Radio Science; Annales Geophysicae; Planetary & Space Science, International Journal of Geomagnetism & Aeronomy; Journal of Atmospheric and Solar-Terrestrial Physics; Astrophysics and Space Sciences Transactions; Earth, Planets and Space; AGU book on ULF waves*
- Referee for research grant proposals submitted to federal funding agencies **NSF** (US) , **ARC** (Australia) and **NSERC** (Canada); internal reviewer of Canada Foundation for Innovation applications from University of Saskatchewan.

Teaching:

1. **Undergraduate teaching** (University of Saskatchewan, Saskatoon, Canada)
 - EP229 “Introductory Electromagnetism and AC circuits”
 - EP228 “Computer Tools for Engineering Physics”
2. **Graduate teaching** (University of Newcastle, NSW, Australia)
 - “Ionospheric Physics” (fourth year elective)
3. **Co-supervision of MS and PhD students**
 - University of Newcastle, NSW, Australia
During 1998-2008 I was unofficially co-supervising/consulting several MS and four PhD students.
 - Virginia Tech University, VA, US
As an Adjunct Associate Professor, I was closely involved in formulating research topics and consulting two PhD students who successfully defended their theses in 2013.
 - University of Saskatchewan, Saskatoon, Canada
I officially co-supervised one MSc student and one PhD student.
4. Project formulation and co-supervision of summer students (University of Saskatchewan)