Rinat **Tagirov**

Research Associate

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Education

ETH Zürich — *Zürich, Switzerland*

Doctor of Sciences — *Sep. 2011 - Oct. 2016*

- Thesis Title: Physical Understanding of Solar Irradiance in UV and Radio Wavelengths.
- Scientific Advisors: Dr. Alexander Shapiro, Prof. Dr. Werner Schmutz

Saint-Petersburg State University — *Saint-Petersburg, Russia*

Specialist Diploma in Astronomy — *Sep. 2006 - Jun. 2011*

- Thesis Title: Physical Conditions in Molecular Clouds at High Redshifts.
- Scientific Advisor: Dr. Alexandre Ivanchik

Skills

Science	Numerical Radiative Transfer, NLTE effects, Solar Irradiance Modeling
Programming	Fortran, Python, Linux, LaTeX, IDL, Git
Languages	Russian (native), English (fluent), German (basic)

Experience

Imperial College London — *London, UK*

Research Associate — *Oct. 2016 — PRESENT*

- Radiative transfer code development, solar spectrum modeling, solar irradiance variability modeling

Physical-Meteorological Observatory Davos — *Davos, Switzerland*

PHD Student — *Sep. 2011 — Sep. 2016*

- Radiative transfer code development, solar spectrum modeling, solar irradiance variability modeling

Ioffe Physical-Technical Institute — *Saint-Petersburg, Russia*

Research Assistant — *Sep. 2010 - Jun. 2011*

- Physics of interstellar medium in the early Universe

Teaching

Faculty of Natural Sciences — *Imperial College London*

First Year Computational Project Supervisor (4 students, 2 projects) — *Mar. 2018 — PRESENT*

- Project #1: Modeling airplane boarding process using statistical mechanics
- Project #2: Modeling rainbow formation

Faculty of Natural Sciences — *Imperial College London*

First Year Computational Project Supervisor (2 students, 1 project) — *Mar. 2017 — June 2017*

- Project: Identification and study of solar active regions using HMI/SDO images

Department of Mechanical Engineering — *ETH Zürich*

Physics Laboratory Practicum Assistant — *Sep. 2013 — Dec. 2014*

- Lab experiment practice instruction and supervision

Department of Physics — *ETH Zürich*

Physics III Course Assistant — *Oct. 2012 — Feb. 2013*

- Excercise classes on optics, statistical mechanics and quantum mechanics

Department of Physics — *ETH Zürich*

Physics II Course Assistant — *Feb. 2012 — May 2012*

- Excercise classes on classical mechanics

Publications

2017

- R. V. Tagirov, A. I. Shapiro and W. Schmutz
  NESSY: NLTE spectral synthesis code for solar and stellar atmospheres
  Astronomy & Astrophysics, 603, A27

- G. Thuillier, P. Zhu, A. I. Shapiro, S. Sofia, R. V. Tagirov, M. van Ruymbeke and W. Schmutz
  Solar disk radius determined from observations made during eclipses by bolometric and photometric instruments on-board the PICARD satellite
  Astronomy & Astrophysics, 603, A28

- J. Gröbner, S. Kazadzis, N. Kouremeti, L. Doppler, R. V. Tagirov, and A. I. Shapiro
  Spectral solar variations during the eclipse of March 20th 2015 at two European sites
  American Institute of Physics Conference Proceedings, 1810, 1

2016

- G. Cessateur, ..., R. V. Tagirov, et al.
  Solar irradiance observations with PREMOS filter radiometers on the PICARD mission: In-flight performance and data release
  Astronomy & Astrophysics, 588, A126

2015

- A. I. Shapiro, S. K. Solanki, N. A. Krivova, R. V. Tagirov and W. K. Schmutz
  The role of the Fraunhofer lines in solar brightness variability
  Astronomy & Astrophysics, 581, A116

Presentations

Sun-climate group seminar of Max-Planck-Institute for Solar System Research — *MPS, Göttingen, Germany*

Invited talk — *Nov. 2015*

Fixing Λ-Iterations in the NESSY code

Solar Metrology: Needs and Methods — *Paris, France*

Conference poster — *Oct. 2014*

Fast NLTE radiative transfer numerical scheme for solar spectrum modeling

Davos Atmosphere and Cryosphere Assembly (DACA-13) — *Davos, Switzerland*

Conference poster — *Jul. 2013*

Analysis of the solar eclipses observed with PREMOS/PICARD

8^{th} European Space Weather Week — *Namur, Belgium*

Conference splinter-session talk — *Nov. 2011*

Analysis of the solar eclipses observed with PREMOS/PICARD

References

Dr. Yvonne Unruh

Reader in Astrophysics

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Dr. Alexander Shapiro

Scientist, ERC Research Group SOLVe Leader

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