

# Andrey Danilenko

Research Scientist  
Ioffe Institute  
Department of Theoretical Astrophysics and  
Department of Mathematical Physics and Applied Mathematics  
Politekhnikeskaya 26  
St. Petersburg 194021 Russia

Phone: +7-812-292-7180

Fax: +7-812-297-1017

Email: [danila@astro.ioffe.ru](mailto:danila@astro.ioffe.ru)

url: <http://www.ioffe.ru/astro/DTA/danila/danila.html>

## Research Interests

Neutron stars; pulsars; pulsar wind nebulae; supernova remnants.

## Employment

2013– Research Scientist at the Ioffe Institute, St. Petersburg, Russia  
2012 Instructor, St. Petersburg Polytechnic University, St. Petersburg, Russia

## Education

2013 Ph.D. in Astrophysics, Ioffe Institute, St. Petersburg, Russia; Thesis title: *Neutron stars in the optical and infrared bands*; Advisor: Prof. Yu. Shibano  
2007 B.S. in Physics, St. Petersburg Polytechnic University, St. Petersburg, Russia

## Grants & Fellowships

2016– Grant for young postdocs, Russian Foundation for Basic Research  
2015–2016 Grant for a group of young postdocs, Russian Foundation for Basic Research  
2014 The St. Petersburg Government fellowship for young postdocs  
2012 The St. Petersburg Government fellowship for graduate students

## Proposals

2016 PI on the Chandra proposal *Measuring the proper motion of the radio-quiet gamma-ray pulsar J0633+0632*  
2016 Co-I on the XMM-Newton proposal *X-ray identification of the high magnetic field pulsar B1727-47*  
2015 Co-I on the XMM-Newton proposal *New Fermi pulsar J0554+3107 in X-rays*

- 2014 PI on the XMM-Newton proposal *The first Fermi pulsar with an X-ray spectral feature*
- 2014 Co-I on the ATCA proposal *High angular resolution study of the J1400-6325 pulsar wind nebula and its host remnant G310.6-1.6 with the ATCA*
- 2013 Co-I on the ATCA proposal *Hunting for a hyperfast pulsar*
- 2012 Co-I on the Spitzer proposal *The Infrared Excess in the Spectrum of the Vela Pulsar*
- 2012 Co-I on the XMM-Newton proposal *Hunting for central compact objects and investigation of galactic SNRs*

### **Research Experience**

- 2016 Peking University and Xinjiang Astronomical Observatory, China
- 2014 Australian Telescope Compact Array, ATNF, Australia
- 2005, 2008
- 2009, 2014
- 2015 Special Astrophysical Observatory, 6-m BTA telescope, Russia

### **Programming & Software Skills**

Python, C, CUDA, Julia, IRAF, MIDAS, XMM-SAS, CIAO, MIRIAD

### **Service**

- 2012– Peer reviewer: The Astrophysical Journal

### **Teaching**

- 2012 Electrodynamics, Quantum Mechanics, St. Petersburg Polytechnic University

## Publications & Talks

### Refereed Publications

- 2017 1. *Observations of the  $\gamma$ -ray pulsar J1932+1916 in X-rays*  
Karpova, A., Shternin, P., Zyuzin, D., **Danilenko, A.**, & Shibano, Y.  
MNRAS, 466, 1757
- 2016 2. *Deep Optical Observations of Unusual Neutron Star Calvera with the GTC*  
Shibano, Y., **Danilenko, A.**, Zharikov, S., Shternin, P., & Zyuzin, D.  
ApJ, 831, 112
- 2016 3. *XMM-Newton studies of the supernova remnant G350.0-2.0*  
Karpova, A., Shternin, P., Zyuzin, D., **Danilenko, A.**, & Shibano, Y.  
MNRAS, 462, 3845
- 2016 4. *Near-infrared observations of PSR J1357-6429*  
Zyuzin, D., Zharikov, S., Shibano, Y., **Danilenko, A.**, Mennickent, R. E., & Kirichenko, A.  
MNRAS, 455, 1746
- 2015 5. *Constraining the parameters of the pulsar wind nebula DA 495 and its pulsar with Chandra and XMM-Newton*  
Karpova, A., Zyuzin, D., **Danilenko, A.**, & Shibano, Y.  
MNRAS, 453, 2241
- 2015 6. *The  $\gamma$ -ray Pulsar J0633+0632 in X-rays*  
**Danilenko, A.**, Shternin, P., Karpova, A., Zyuzin, D., & Shibano, Y.  
PASA, 32, e038
- 2015 7. *Observations of PSR J1357-6429 at 2.1 GHz with the Australia Telescope Compact Array*  
Kirichenko, A., Shibano, Y., Shternin, P., Johnston, S., Voronkov, M. A., **Danilenko, A.**, Barsukov, D., Lai, D., & Zyuzin, D.  
MNRAS, 452, 3273
- 2015 8. *Optical Observations of Psr J2021+3651 in the Dragonfly Nebula With the GTC*  
Kirichenko, A., **Danilenko, A.**, Shternin, P., Shibano, Yu., Ryspaeva, E., Zyuzin, D., Durrant, M., Kargaltsev, O., Pavlov, G., & Cabrera-Lavers, A.  
ApJ, 802, 17
- 2014 9. *Thermal Properties of the Middle-aged Pulsar J1741-2054*  
Karpova, A., **Danilenko, A.**, Shibano, Y., Shternin, P., & Zyuzin, D.  
ApJ, 789, 97
- 2014 10. *Deep optical observations of the  $\gamma$ -ray pulsar J0357+3205*  
Kirichenko, A., **Danilenko, A.**, Shibano, Y., Shternin, P., Zharikov, S., & Zyuzin, D.  
A&A, 564, A81
- 2013 11. *The Vela Pulsar and Its Likely Counter-jet in the Ks Band*  
Zyuzin, D., Shibano, Y., **Danilenko, A.**, Mennickent, R. E., & Zharikov, S.  
ApJ, 775, 101
- 2013 12. *Deep optical imaging of the  $\gamma$ -ray pulsar J1048-5832 with the VLT*  
**Danilenko, A.**, Kirichenko, A., Sollerman, J., Shibano, Y., & Zyuzin, D.  
A&A, 552, A127

- 2012 13. *Possible optical counterpart of PSR J1357-6429*  
**Danilenko, A.**, Kirichenko, A., Mennickent, R. E., Pavlov, G., Shibano, Yu., Zharikov, S., & Zyuzin, D.  
A&A, 540, A28
- 2011 14. *The Vela and Geminga pulsars in the mid-infrared*  
**Danilenko, A. A.**, Zyuzin, D. A., Shibano, Y. A., & Zharikov, S. V.  
MNRAS, 415, 867
- 2009 15. *The G292.0+1.8 pulsar wind nebula in the mid-infrared*  
Zyuzin, D. A., **Danilenko, A. A.**, Zharikov, S. V., & Shibano, Y. A.  
A&A, 508, 855
- 2009 16. *Nonlinear spiral waves in a galactic disk*  
Alekseev, P. S., & **Danilenko, A. A.**  
Soviet Journal of Experimental and Theoretical Physics Letters, 89, 219

#### Conference Proceedings & Theses

- 2017 1. *Proper motion of the radio pulsar B1727-47 and its association with the supernova remnant RCW 114*  
Shternin, P. S., Yu, M., Kirichenko, A. Yu., Shibano, Yu. A., **Danilenko, A. A.**, Voronkov, M. A., & Zyuzin, D. A.  
Journal of Physics: Conference Series, 929, 012004
- 2017 2. *XMM-Newton observations of the  $\gamma$ -ray pulsar J0633+0632*  
Karpova, A., Shternin, P., Zyuzin, D., **Danilenko, A.**, & Shibano Yu.  
Journal of Physics: Conference Series, 929, 012011
- 2017 3. *Confirming the nature of the knot near the pulsar B1951+32*  
Zyuzin, D. A., Shibano, Yu. A., Pavlov, G. G., & **Danilenko, A.**  
Journal of Physics: Conference Series, 929, 012054
- 2016 4. *Radio-interferometric and near-IR observations of PSR J1357-6429*  
Kirichenko, A. Zyuzin, D., Shibano, Yu., Shternin, P., **Danilenko, A.**, Zharikov, S., Voronkov, M., Barsukov, D., & Mennickent, R.  
Journal of Physics: Conference Series, 769, 012004
- 2016 5. *X-ray Analysis of the Pulsar Wind Nebula DA 495 and its Central Object*  
Karpova, A., Zyuzin, D., **Danilenko, A.**, & Shibano, Yu.  
Journal of Physics: Conference Series, 769, 012002
- 2016 6. *X-ray Analysis of the Bright Source in the Supernova Remnant G350.0-2.0 Field*  
Karpova, A., Shternin, P., Zyuzin, D., **Danilenko, A.**, & Shibano, Yu.  
Journal of Physics: Conference Series, 769, 012003
- 2015 7. *Optical observations of PSR J2021+3651 with the GTC*  
Ryspaeva, E. B., Kirichenko, A. Y., Shibano, Y. A., Shternin, P. S., **Danilenko, A. A.**, Zyuzin, D. A., Durant, M., Kargaltsev, O. Yu, Pavlov, G. G., & Cabrera-Lavers, A.  
Journal of Physics: Conference Series, 661, 012011
- 2014 8. *XMM-Newton observations of SNR G350.0-2.0*  
Zyuzin, D., **Danilenko, A.**, Karpova, A., Shibano, Y., & Shternin, P.  
The X-ray Universe 2014, 343
- 2014 9. *Thermal properties of three Fermi pulsars*

- Danilenko, A.**, Karpova, A., Kirichenko, A., Shibano, Y., Shternin, P., Zharikov, S., & Zyuzin, D.  
The X-ray Universe 2014, 57
- 2013 10. *The Guitar Nebula Studies at Optical Wavelengths*  
**Danilenko, A.**, Komarova, V., Moiseev, A., & Shibano, Y.  
The Fast and the Furious: Energetic Phenomena in Isolated Neutron Stars, Pulsar Wind Nebulae and Supernova Remnants, 67
- 2013 11. *Solving the Vela pulsar infrared excess problem*  
Zyuzin, D., Shibano, Y., **Danilenko, A.**, Zharikov, S., & Mennickent, R.  
The Fast and the Furious: Energetic Phenomena in Isolated Neutron Stars, Pulsar Wind Nebulae and Supernova Remnants, 65
- 2013 12. *Deep observations of PSR J0357+3205 with GTC*  
Kirichenko, A., Zharikov, S., Shibano, Y., Zyuzin, D., Shternin, P., & **Danilenko, A.**  
The Fast and the Furious: Energetic Phenomena in Isolated Neutron Stars, Pulsar Wind Nebulae and Supernova Remnants, 57
- 2012 13. *Optical Observations of PSR J1357-6429 Field*  
Kirichenko, A., **Danilenko, A.**, Mennickent, R. E., Pavlov, G., Shibano, Y., Zharikov, S., & Zyuzin, D.  
Electromagnetic Radiation from Pulsars and Magnetars, 466, 29

#### Other Materials

- 2014 1. *High angular resolution study of the J1400-6325 pulsar wind nebula and its host remnant G310.6-1.6 with the ATCA*  
Kirichenko, A., Voronkov, M., Shibano, Y., **Danilenko, A.**, & Zyuzin, D.  
ATNF Proposal, 6456
- 2014 2. *VizieR Online Data Catalog: PSR J0357+3205 g' imaging (Kirichenko+, 2014)*  
Kirichenko, A., **Danilenko, A.**, Shibano, Y., Shternin, P., Zharikov, S., & Zyuzin, D.  
VizieR Online Data Catalog, 356
- 2013 3. *VizieR Online Data Catalog: PSR J1048-5832 V and R images (Danilenko+, 2013)*  
**Danilenko, A.**, Kirichenko, A., Sollerman, J., Shibano, Y., & Zyuzin, D.  
VizieR Online Data Catalog, 355
- 2013 4. *Hunting for a hyperfast pulsar*  
Kirichenko, A., Johnston, S., Camilo, F., Shibano, Y., **Danilenko, A.**, & Lai, D.  
ATNF Proposal, 5610
- 2012 5. *The Infrared Excess in the Spectrum of the Vela Pulsar*  
Posselt, B., Pavlov, G., Shibano, Y., Kargaltsev, O., **Danilenko, A.**, & Zyuzin, D.  
Spitzer Proposal, 90140
- 2012 6. *Is the velocity of PSR J1357-6429 nearly 2000 km/s?*  
Kirichenko, A., Johnston, S., Camilo, F., Shibano, Y., & **Danilenko, A.**  
ATNF Proposal, 5152