**DMITRY A. DUEV**

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**EDUCATION**

2010 – 2012 Ph.D. in Astronomy, Department of Physics, Lomonosov Moscow State University (MSU), Russia. Specialization: astrometry and celestial mechanics.

2004 – 2010 Specialist in Astronomy (B.Sc. + M.Sc.), Department of Physics, MSU, Russia. Specialization: astrometry. Diploma with honors. GPA: 4.0/4.0.

**PROFESSIONAL EXPERIENCE**

2018 – pres. Research Scientist, Astronomy Dept., California Institute of Technology (Caltech), Pasadena, CA, USA.

2015 – 2018 Postdoctoral Scholar in Astronomy, Astronomy Dept., Caltech, Pasadena, CA, USA.

2013 – 2015 Postdoctoral Researcher & Support Scientist, Science Ops. and Support & Space Science and Innovative Applications groups, Joint Institute for VLBI ERIC (JIVE), Dwingeloo, The Netherlands.

2010 – 2012 Visiting Researcher, Space Science and Innovative Applications group, JIVE, The Netherlands.

2010 – 2013 Engineer, Laboratory of Gravimetry, Sternberg Astronomical Institute (SAI), MSU, Russia.

2009 Researcher, Dorodnitsyn Computing Centre, Russian Academy of Sciences (CC RAS), Moscow, Russia.

2006 – 2008 Research assistant, Laboratory of Gravimetry, SAI MSU, Russia.

**TECHNICAL SKILLS**

Extensive knowledge and experience: algorithms, API design, containerization and orchestration, data processing pipelines, data structures, distributed systems, full-stack web development, GPU & Edge computing, large databases, machine and deep learning, networking, programming, streaming, testing, \*nix operating systems

GitHub profile: <https://github.com/dmitryduev>

**EXPERTISE**

Astroinformatics Machine/deep learning, distributed data processing systems, large databases, high performance/GPU/Edge computing, and mathematical methods in data processing and analysis.

Radio astronomy Interferometric and Doppler measurements of spacecraft. Standard, near-field and space VLBI, signal delay modelling, propagation effects, phase calibration methods, imaging. VLBI and Doppler data processing and analysis for the use in planetary science, interplanetary plasma physics, geodesy, and fundamental physics.

Optical/NIR astronomy Astrometry of asteroids with adaptive optics, imaging of Solar system planets with adaptive optics.

**MEMBERSHIP IN PROFESSIONAL ASSOCIATIONS**

American Astronomical Society (AAS), International AstroInformatics Association (IAIA)

**PUBLICATIONS**

120+ publications including 40+ refereed publications in top journals

H-index: 16; 700+ citations

Co-discoverer of 80+ near-Earth asteroids

Google Scholar profile: <https://scholar.google.com/citations?user=wkeIw9IAAAAJ>

**SELECTED PUBLICATIONS**

D.A. Duev, A. Mahabal, F.J. Masci et. al, Real-bogus classification for the Zwicky Transient Facility using deep learning, 2019, MNRAS, 489, 3582

D.A. Duev, A. Mahabal, Q.-Z. Ye et. al, DeepStreaks: identifying fast-moving objects in the Zwicky Transient Facility data with deep learning, 2019, MNRAS, 486, 4158

R. Jensen-Clem, D.A. Duev, R. Riddle et. al, The performance of the Robo-AO laser guide star adaptive optics system at the Kitt Peak 2.1 m telescope, 2018, The Astronomical Journal 155 (1), 32

D.A. Duev, S.V. Pogrebenko, G. Cimò et. al, Planetary Radio Interferometry and Doppler Experiment (PRIDE) technique: A test case of the Mars Express Phobos fly-by, 2016, Astronomy & Astrophysics, 593, A34

D.A. Duev, M.V Zakhvatkin, V.A. Stepanyants et. al, RadioAstron as a target and as an instrument: Enhancing the Space VLBI mission’s scientific output, 2015, Astronomy & Astrophysics, 573, A99

D.A. Duev, G.M. Calvés, S.V. Pogrebenko et. al, Spacecraft VLBI and Doppler tracking: algorithms and implementation, 2012, Astronomy & Astrophysics, 541, A43

**PRESENTATIONS**

50+ presentations at prestigious national and international events, including TensorFlow World, Astroinformatics, AAS, DPS, EPSC, AGU, EGU, EWASS, IVS, SPIE, NAC, COSPAR, MS3, YERAC conferences/meetings.

**SELECTED INVITED TALKS**

2019/04 Space Telescope Science Institute (STScI), Baltimore, MD, USA

2017/10 Harvard-Smithsonian Center for Astrophysics (CfA), Cambridge, MA, USA. Host: Peter Veres

2016/05 NASA Jet Propulsion Laboratory (JPL), Pasadena, CA, USA. Host: Slava G. Turyshev

2016/02 National Radio Astronomy Observatory (NRAO), Socorro, NM, USA. Host: Paul Demorest

2015/02 California Institute of Technology, Pasadena, CA, USA. Host: Shrinivas R. Kulkarni

2013/10 ASTRON Netherlands Institute for Radio Astronomy, Dwingeloo, The Netherlands. Host: Leonid Gurvits

2012/05 ESA European Space Operations Center (ESOC), Darmstadt, Germany. Host: Trevor Morley

2011/11 ASTRON Netherlands Institute for Radio Astronomy, Dwingeloo, The Netherlands. Host: Leonid Gurvits

**ASTRONOMICAL OBSERVING EXPERIENCE**

Radio, VLBI European VLBI Network (EVN), Very Long Baseline Array (VLBA), Long Baseline Array (LBA)

Optical, IR Kitt Peak 2.1m (adaptive optics observations with Robo-AO, over 100 nights), Keck-II (NIRC2, ESI)

Miscellaneous GPS/GLONASS and gravimetric field surveys

**SERVICE FOR COMMUNITY**

2013 – pres. Journal referee for Astronomy and Computing, Astronomy & Astrophysics, MNRAS, Journal of Geodesy, Planetary and Space Science

2017 Time allocation committee member for Caltech Optical Observatories

2014 Astronomy colloquium organizer at ASTRON/JIVE

**LANGUAGES**

Russian: native, English: fluent, Dutch: intermediate, German: intermediate