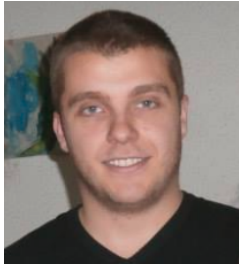


Marko Pavlović



Website: www.math.rs/~marko
Email: marko@matf.bg.ac.rs
Phone: (+381) 64 865 0166
Date of birth: July 16, 1987.
Address: Mokroluška 24/10, Belgrade

WORKING EXPERIENCE

My work is mostly based on numerical simulations, high performance computing and statistical analysis. I'm passionate about researching, technology, taking on challenges and solving new kinds of problems. As a scientist, I'm very experienced in exploring, modeling and interpreting data by using various mathematical methods. Python is quickly becoming a standard for my colleagues and me working in astronomy, as a powerful and modular programming language. My previous experience and interests led me to apply for Data Science position in Microsoft DCS.

Research Assistant

Feb 2012 to present

Job description: distributed computing and simulations
Faculty of Mathematics, Department of Astronomy
University of Belgrade

Junior Researcher

Jan 2011 to Feb 2012

Job description: statistical analysis of supernova remnants
Faculty of Mathematics, Department of Astronomy
University of Belgrade

Scientific Project

Jan 2011 to present

“Emission nebulae: structure and evolution” (176005)
Financed by the Ministry of Education, Science, and
Technological Development of the Republic of Serbia
(Basic Research: Earth sciences and Astronomy)
Project PI: dr Dejan Urošević

EDUCATION

Faculty of Mathematics, University of Belgrade, Serbia

Ph.D., Department of astronomy (Astrophysics Major), *Expected:* Winter 2017

- Title: *Modeling the radio evolution of supernova remnants by using hydrodynamic simulations and non-linear particle acceleration*
- Advisor: Urošević Dejan, Ph.D

M.S., Department of astronomy (Astrophysics Major), Sep 2011

- Title: *New Σ -D relation for Galactic supernova remnants*
- Advisor: Urošević Dejan, Ph.D

B.S., Department of astronomy (Astrophysics Major), 9.97/10 with honors, Sep 2010

COMPUTER SKILLS

DOS, UNIX, Windows, Linux
C, C++, OpenMPI, Python, Pascal, JavaScript, PHP, MySQL
MATLAB, Mathematica, Origin, IDL, ParaView, VisIt and others

LANGUAGES English - full professional proficiency
Russian - limited working proficiency

RESEARCH INTERESTS particle acceleration at shocks, evolution of supernova remnants (SNRs), radio astrophysics, cosmic rays, magnetohydrodynamic and particle-in-cell simulations, high performance computing, statistics and Monte Carlo methods, machine learning

REFEREED JOURNAL PUBLICATIONS Pavlović, M. Z., 2017: "Hydrodynamical and radio evolution of young supernova remnant G1.9+0.3 based on the model of diffusive shock acceleration", Monthly Notices of the Royal Astronomical Society, Vol. 468, 1616 (15pp)

Bozzetto, L. M., Filipović, M. D., Urošević, D., Pavlović, M. Z., Arbutina, B., Vukotić, B., Kavanagh, P. J., Maggi, P., Sasaki, M., Haberl, F., 2016: "Statistical analysis of supernova remnants in the Large Magellanic Cloud", Astrophysical Journal Supplement Series, in press

Vučetić, Dobardžić, A., Pavlović, M. Z., Pannuti, T. G., Petrov, N., Göker, Ü. D., Ercan, E. N., 2015: "Optical observations of the nearby galaxy IC342 with narrow band [SII] and H α filters. II - The detection of 16 optically - identified supernova remnant candidates", Serbian Astronomical Journal, No. 191, 67 (8pp)

Pavlović, M. Z., Dobardžić, A., Vukotić, B., Urošević, D., 2014: "Updated radio Sigma-D relation for Galactic supernova remnants", Serbian Astronomical Journal, No. 189, 25 (16pp)

Pavlović, M. Z., Urošević, D., Vukotić, B., Arbutina, B. and Göker, Ü. D., 2013: "The radio surface brightness to diameter relation for Galactic supernova remnants: sample selection and robust analysis with various fitting offsets", The Astrophysical Journal Supplement Series, Vol. 204, 4 (16pp)

Arbutina, B., Urošević, D., Vučetić, M. M., Pavlović, M. Z. and Vukotić, B., 2013: "Modified equipartition calculation for supernova remnants. Cases $\alpha=0.5$ and $\alpha=1.0$ ", The Astrophysical Journal, Vol. 777, 31 (3pp)

Zeković, V., Arbutina, B., Dobardžić, A., Pavlović, M. Z., 2013: "Relativistic non-thermal bremsstrahlung radiation", International Journal of Modern Physics A, Vol. 28, No. 29, 1350141 (17pp)

Vučetić, M. M., Arbutina, B., Urošević, D., Dobardžić, A., Pavlović, M. Z., Pannuti, T. G., Petrov, N., 2013: "Optical observations of the nearby galaxy IC342 with narrow band [SII] and H α filters", Serbian Astronomical Journal, No. 187, 11 (8pp)

Arbutina, B., Urošević, D., Vučetić, M. M., Pavlović, M. Z. and Vukotić, B., 2012: "Modified equipartition calculation for supernova remnants", The Astrophysical Journal, Vol. 746, 79 (8pp)

ARTICLES APPEARING IN EDITED VOLUMES Arbutina, B., Urošević, D., Vučetić, M. M., Pavlović, M. Z., 2011: "Equipartition calculation for supernova remnants", Proceedings of the Cosmic Rays and their Interstellar Medium Environment CRISM) conference, 26 June - 1 July, 2011, Montpellier, France; Mem. S.A.It., 82, 822-823

Pavlović, M. Z., Urošević, D., Arbutina, B., 2016: "Radio evolution of supernova remnants including non-linear particle acceleration", Cosmic Ray Origin - beyond the

