

Predrag Punoševac

CURRICULUM VITÆ

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Citizenship

U.S.A.

Research interests

Dynamical systems and applications

Selected publications

- [1] Predrag Punoševac and Sam L. Robinson. Dynamics of uncertainties for bound one-dimensional semiclassical wave packets. *J. Math. Phys.*, 57(9):092102, 10, 2016.
- [2] Christian Poppeliers and Predrag Punoševac. Three-dimensional wave gradiometry for polarized seismic waves. *Bulletin of the Seismological Society of America*, 103(4):2161–2172, 2013.
- [3] Christian Poppeliers, Predrag Punoševac, and Tammy Bell. Three-dimensional seismic-wave gradiometry for scalar waves. *Bulletin of the Seismological Society of America*, 103(4):2151–2160, 2013.
- [4] Predrag Punoševac and Sam L. Robinson. Asymptotically minimal uncertainty states for time-dependent oscillators. *J. Math. Phys.*, 54(1):012106, 16, 2013.
- [5] Predrag Punoševac and Qiudong Wang. Regularization of simultaneous binary collisions in some gravitational systems. *Rocky Mountain J. Math.*, 42(1):257–283, 2012.

Education

2003–2007 **Ph.D. in Mathematics**, *University of Arizona*, Tucson, Arizona.

Thesis title *Regularization of Simultaneous Binary Collisions in Some Gravitational Systems*

Advisor Qiudong Wang

1996–1997 **M.A. in Mathematics**, *University of Toledo*, Toledo, Ohio.

1991–1995 **B.Sc. in Mathematics and Astronomy**, *University of Belgrade*, Belgrade, Serbia.

Employment

2013–present **Systems Analyst**, *Carnegie Mellon University*, Auton Lab, Robotics Institute.

- Technical responsibilities include: operating system installations and upgrades, network planning and implementation, security, users management, systems programming, maintenance of large-scale distributed computing system including secure storage and access to raw experimental data for a premier machine learning and data mining research group.
- Dynamical systems analysis for machine learning.
- Design and analysis of algorithms and data structures.

- 2010–2013 **Assistant Professor**, *Augusta State University*, Department of Mathematics.
- Taught four courses per semester: Linear Algebra, Differential Equations, Mathematical Structures for Computer Science, Calculus and Analytic Geometry I & II, Precalculus, and College Algebra.
 - Academic advising.
 - Development and implementation of the Cloud Computing Lab (CCL).
- 2009–2010 **Visiting Lecturer**, *Georgia State University*, Dept. of Mathematics & Statistics.
- Taught four courses per semester: Introduction to Mathematical Modeling, Elementary Statistics, and Calculus II.
 - Course coordinator for Elementary Statistics.
 - Developing and implementing large-scale course redesign for Web delivery.
- 2008–2009 **Assistant Professor**, *Lander University*, Department of Mathematics.
- Taught four courses per semester: Real Analysis, Complex Variables, Linear Algebra, Introduction to Discrete Mathematics, Mathematics for Business, Life Sciences, and the Social Sciences.
- 2003–2008 **Teaching Associate**, *University of Arizona*, Department of Mathematics.
- Taught up to two course per semester: Introduction to Ordinary Differential Equations, Vector Calculus, Calculus I with Applications, Brief Calculus, College Algebra, Plane Trigonometry.
 - Supervising undergraduate students working on research projects.
 - Qualifying exam review session leader for Real Analysis.
 - Super TA for applied mathematics core graduate course Principles of Analysis.
- Spring 2003 **Visiting Instructor**, *Oberlin College*, Department of Mathematics.
- Taught two courses: Calculus II and Multivariable Calculus.
- 2002–2003 **Adjunct Faculty**, *John Carroll University*, Department of Mathematics.
- Taught one course per semester: Calculus and Analytical Geometry.
 - Tutoring room coordinator.
- 1996–2002 **Teaching Assistant**, *University of Toledo*, Department of Mathematics.
- Taught independently one course per semester: Calculus I-III, Numerical Methods and Linear Algebra, College Algebra, Math for Life Science, Modern Business Math, Beginning and Intermediate Algebra, Calculus for Engineering Tech.
- 1995–1996 **Teaching Assistant**, *University of Belgrade*, Faculty of Mathematics.
- Conducting discussion sessions for two course per semester: Positional astronomy and Ephemeral astronomy. Utilized programming languages FORTRAN and C to support numerical computations.

Selected talks

- April 2013 *Asymptotically Minimal Uncertainty States for Time-Dependent Oscillators*, Carolina Dynamics Symposium, UNC Chapel Hill
- February 2011 *Numerical Investigations of Chaotic Attractors in Some Classical Systems*, Mathematics Colloquium, Augusta State University
- September 2010 *Regularization of Simultaneous Binary Collisions in Some Gravitational Systems*, Mathematics Colloquium, USC Aiken
- April 2009 *Dynamics of a Periodically Perturbed Plane Pendulum*, Carolina Dynamics Symposium, UNC Charlotte
- April 2008 *An Introduction to Dynamical Systems*, Mathematics Colloquium, Wabash College
- September 2006 *Normal Forms in Local Dynamical Systems*, Graduate Student Colloquium, University of Arizona
- October 2005 *Regularization of Simultaneous Binary Collisions in Some Gravitational Systems*, Midwest Dynamical Systems Conference, Northwestern University

Grants and awards

- 2013–2014 MAA Project NExT-SE Fellow
2013–2016 NSF conference grant DMS-1301581, amount \$24,000
2012 NSF conference grant DMS-1201546, amount \$8,190
2010–2012 Augusta State University Committee for Undergraduate Research and Scholarship research grants, amounts range \$472–\$1,500 with the total of \$2572
Summer 2007 VIGRE REU mentoring fellowship \$3,600
2006–2007 VIGRE research fellowship \$16,000
1998–2005 NSF travel grants, amounts range \$200–\$500 with the total of \$2000
1996–1997 City of Kruševac grant for study in U.S.A. \$2,000
1995 University of Belgrade Zaharije Brkić award for the best astronomy student \$100

Synergistic activities

- April 2012 **Co-organizer**, *Carolina Dynamics Symposium*, Clemson University.
March 2011 **Organizer**, *New Pedagogical Approaches in Mathematics and Science Education*, workshop, Augusta State University.
2010–2013 **Coordinator**, *Mathematics colloquium*, Augusta State University.
2010–2013 **Faculty member in charge** of the *Putnam* preparation sessions and contest administration, Augusta State University.

Extended professional travel

- June/July 1996 **Visiting Scholar**, *Observatoire de la Côte d'Azur*, Nice, France.
Host Alessandro Morbidelli

Service

Committee service

- 2012–2013 **Budget & university resources committee**, *Augusta State University*.
2012–2013 **Research technology advisory committee**, *Augusta State University*.
2012–2013 **Pamplin student research and travel committee**, *Augusta State University*.
2012–2013 **University library committee**, *Augusta State University*.
Spring 2010 **Large-scale course redesign committee**, *Georgia State University*.
2006–2007 **Graduate student committee**, *University of Arizona*.

Service to students

- 2011–2013 **Sponsor**, *Euclidean Society/MAA Student Chapter*.

Service to the community

- 2016–present **Reviewer for:**, *Mathematical Reviews*, *zbMATH*.

K-12 education outreach

- 2012–2015 **Reader**, *College Board's AP Calculus Exam*.
2015 **Contest manager**, *United States of America Mathematical Olympiad (USAMO)*.
2013–2016 **Contest manager**, *American Invitational Mathematics Examination (AIME)*.
2011–2016 **Contest manager**, *American Mathematics Competitions (AMC 10/12)*.

Languages

Serbian **Native**

English **Fluent**

Russian **Conversant**

Mother tongue

Full professional proficiency

Limited working proficiency

Computer skills

Operating systems

OpenBSD, Red Hat Enterprise Linux, FreeBSD

Administration

network PF, DNS, DHCP, OpenSSH, OpenVPN, L2TP/IPsec, SNMP

directory service LDAP

storage ZFS, Hardware RAID, Software RAID

file access NFS, SSHFS

virtualization AWS (Xen), Linux KVM, FreeBSD Jails, VirtualBox

monitoring syslog-ng, LibreNMS, collectd, M/Monit, NfSen

orchestration Ansible

Programming languages

scripting sh/ksh, sed, AWK, Makefile

compiled C, FORTRAN

interpreted Python, MATLAB

markup T_EX, mdoc, XHTML, txt2tags, LilyPond

style sheet CSS

Numerical computing environments

MATLAB, FreeMat

Memberships

American Mathematical Society