

Rok Roškar

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Personal

Born on March 13, 1981 in Ljubljana, Slovenia.

Citizen of Slovenia.

Education

B.A. Washington University in St. Louis, 2003, *Summa Cum Laude*

Physics

Jewish, Islamic, and Near-Eastern Studies

M.A. Astronomy, University of Washington 2006

Ph.D. Astronomy, University of Washington, *expected* 2010.

Research and Work Experience

University of Washington, 2004 - 2010

Predocctoral Research Associate and Research Assistant, N-Body Shop

Simulations of galactic disk formation and evolution with Tom Quinn and Victor Debattista

Study of supermassive black hole mergers in hydrodynamical simulations including star formation and feedback with Tom Quinn, Lucio Mayer (University of Zurich), and Stelios Kazantzidis (Ohio State University)

Environmental Agency of the Republic of Slovenia - Meteorological Center, 2003 - 2004

Development of data control software using wavelet algorithms

Database maintenance

Washington University in St. Louis, Department of Physics, 2001 - 2003

Undergraduate Research Assistant for Prof. James Buckley

Development of photometry software

Design of an imaging polarimeter for use in gamma-ray optical counterpart studies

Teaching Experience

Teaching Assistant, University of Washington

Fall 2004 - Astronomy 101

Winter 2004 - Spring 2005 - Astronomy 150 "The Planets"

Spring 2007 - Head Teaching Assistant, Astronomy 101

Spring 2008 - Astronomy 480 "Introduction to Data Analysis"

Lectures

Spring 2008 - Guest lecture for upper-level undergraduate astronomy class, University of Ljubljana, Slovenia

Spring 2009 - Guest lecture on disk evolution and stellar migration for graduate course on Galactic structure, University of Washington

Publications

Refereed Journal Articles (click for ADS listing)

R. Roškar, V. P. Debattista, A. M. Brooks, T. R. Quinn, C. B. Brook, F. Governato, and J. Wadsley. Misaligned Disks in Cosmological Simulations. *in prep*, 2009.

B. F. Williams, J. J. Dalcanton, A. Stilp, K. Gilbert, **R. Roškar**, A. C. Seth, D. Weisz, A. Dolphin, S. M. Gogarten, E. Skillman, and J. Holtzman. The ACS Nearby Galaxy Survey Treasury IV: The Star Formation History of NGC 2976. *ApJ submitted*, 2009.

L. V. Sales, A. Helmi, M. G. Abadi, C. B. Brook, F. A. Gómez, **R. Roškar**, V. P. Debattista, M. Steinmetz, and Á. Villalobos. Orbital Eccentricity as a Probe of Thick Disk Formation Scenarios. *MNRAS submitted*, 2009.

N. A. Bond, Z. Ivezić, B. Sesar, M. Juric, J. Munn, A. Kowalski, S. Loebman, **R. Roškar**, and et al. The Milky Way Tomography with SDSS: III. Stellar Kinematics. *ArXiv e-prints*, Aug. 2009.

R. Roškar, V. P. Debattista, T. R. Quinn, G. S. Stinson, and J. Wadsley. Riding the Spiral Waves: Implications of Stellar Migration for the Properties of Galactic Disks. *ApJ*, 684:L79–L82, Sept. 2008.

R. Roškar, V. P. Debattista, G. S. Stinson, T. R. Quinn, T. Kaufmann, and J. Wadsley. Beyond Inside-Out Growth: Formation and Evolution of Disk Outskirts. *ApJ*, 675:L65–L68, Mar. 2008.

Conference Proceedings

R. Roskar, V. P. Debattista, T. R. Quinn, G. S. Stinson, J. Wadsley, and T. Kaufmann. Clues to radial migration from the properties of outer disks. In J. Andersen, J. Bland-Hawthorn, and B. Nordström, editors, *IAU Symposium*, volume 254 of *IAU Symposium*, pages 64P–+, Mar. 2009.

S. Loebman, **R. Roškar**, Ž. Ivezić, M. Jurić, B. Sesar, V. P. Debattista, T. R. Quinn, G. S. Stinson, and J. Wadsley. SDSS Observations of the Milky Way vs. N-body Models: A Comparison of Stellar Distributions in the Position-Velocity-Metallicity Space. In *American Institute of Physics Conference Series*, volume 1082 of *American Institute of Physics Conference Series*, pages 238–242, Dec. 2008.

R. Roškar, V. P. Debattista, G. S. Stinson, T. R. Quinn, T. Kaufmann, and J. Wadsley. Learning about Disk Formation from Their Outskirts. In J. G. Funes and E. M. Corsini, editors, *Astronomical Society of the Pacific Conference Series*, volume 396 of *Astronomical Society of the Pacific Conference Series*, pages 217–+, Oct. 2008.

Talks and Conferences

Understanding Disk Evolution through their Outskirts, “Hunting for the Dark: the Hidden Side of Galaxy Formation” Conference, Malta, October 2009 (contributed talk)

Implications of Radial Migration for the Properties of Galactic Disks, Galaxy Formation Workshop, University of California Santa Cruz, August 2009 (contributed talk)

Clues about Disk Evolution from the Outermost Reaches of Galaxies, CCAPP Seminar, Ohio State University, April 2009

Clues about Disk Evolution from the Outermost Reaches of Galaxies, Astronomy Colloquium, Case Western Reserve University, Cleveland, Ohio, February 2009

Implications of Radial Migration for the Properties of Galactic Disks, KITP Conference: “Back to the Galaxy II”, Santa Barbara, CA, October 2008 (poster contribution)

Learning about Galaxy Formation from the Outer Disk, IAU Symposium 254, “The Galaxy Disk in a Cosmological Context”, Copenhagen, June 2008 (poster contribution)

Learning about Galaxy Evolution from the Outer Regions of Disks, Galaxy Evolution Discussion Group, Oxford University, March 2008 (talk)

Disk Breaks in N-body/SPH Simulations, Centre for Astrophysics Research Discussions, University of Central Lancashire, Preston, UK, September 2007 (talk)

Galactic Disk Breaks, “Formation and Evolution of Galaxy Disks Conference”, Rome, October 2007 (poster contribution)

Disk Breaks in N-body/SPH Simulations, “A New Zeal for Old Galaxies”, Rotorua, New Zealand, March 2007 (poster contribution)

Characterizing Disk Truncations with N-body Simulations, American Astronomical Society meeting, January 2007 (poster contribution)

Grants

\$39,432.89 U.W. Student Technology Fee grant for purchasing 35 new desktops for the astronomy graduate and undergraduate students as an upgrade to our distributed computing network, Spring 2008

\$70,000 U.W. Student Technology Fee grant for the purchase of a data analysis and visualization server, Spring 2007

\$5000 Sigma-Xi “Grants-in-aid of Research” grant to purchase wiring and network equipment required for the supercomputer funded by the UW STF, Spring 2006

\$104,000 U.W. Student Technology Fee grant for the purchase of a small supercomputer dedicated for student research, Spring 2006

Awards and Scholarship

1999 - 2006 Scholarship of republic of Slovenia for promising students (Zoisova stipendija)

2003 Nominated and accepted into the Sigma Xi scientific honorary

2003 Washington University - Senior prize for outstanding performance in physics by a graduating senior

2001 Washington University - Robert N. Varney prize for outstanding performance in introductory physics

2000-2003 Washington University Arts and Sciences Scholar

2000-2003 Society of physics students - Washington University chapter

Press and Public Outreach

University of Washington Press Release: Immigrant Sun: Our star could be far from where it started in Milky Way

Washington Post: Wandering Sun (September 22, 2008)

National Geographic: Stars Migrate Through Galaxies, Study Suggests (September 18, 2008)

New Scientist: Sun may have been thrown far from its birthplace (September 17, 2008)

ScienceNOW: Like a Rolling Sun? (September 17, 2008)

The Birth and Life of Spiral Galaxies: from Cosmic Radiation to Immigrant Stars, Battle Point Astronomical Association, Bainbridge, WA, June 2009

Rojstvo in življenje spiralnih galaksij (The Birth and Life of Spiral Galaxies), Lecture on current astronomy research at the Adult Education Center, Ljubljana, Slovenia, December 2008

Last updated: September 7, 2009

<http://www.astro.washington.edu/users/roskar/astronomy/rokc.pdf>