

Curriculum Vitae (short) – Dan Milisavljevic

Smithsonian Astrophysical Observatory
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RESEARCH INTERESTS

Multi-wavelength investigations of astrophysical transients discovered via time-domain surveys; the explosion mechanisms, progenitor stars, and environmental impacts of supernovae; massive star mass loss; minor planets and irregular moons of the solar system; formation and destruction of molecules and their relation to the origin of organic matter in the universe.

EDUCATION

- Ph.D.**, Physics and Astronomy, Dartmouth College June 2011
Advisor: Prof. Robert A. Fesen
Kinematic and Chemical Properties of Core-Collapse Supernova Ejecta
- M.Sc.**, Philosophy & History of Science, London School of Economics June 2005
Advisor: Prof. John Worrall
Quantum Mechanics, Quantum Information Theory, and the Sirens of Interpretation
- B.Arts.Sc.**, Arts & Science and Physics, McMaster University May 2004
Advisor: Prof. Miroslav Lovric
Lost in Translation: Defining the Barriers of Language in Undergraduate Science Education

PROFESSIONAL POSITIONS HELD

- Postdoctoral Fellow** July 2014 – present
Smithsonian Astrophysical Observatory, High Energy Astrophysics Division
Supervisor: Dr. Daniel Patnaude
- Postdoctoral Fellow** September 2011 – June 2014
Harvard University, Theory Division & Optical/Near-infrared Division
Supervisor: Dr. Alicia M. Soderberg

PUBLICATIONS*

Author of 64 publications (12 first author) submitted or accepted to *Nature*, *Science*, *ApJ*, *ApJL*, *ApJS*, *AJ*, *MNRAS*, and *Icarus*, with an h-index of 22. Author of 129 astronomical telegrams, meeting abstracts, and other non-referred publications. Invited contributor to newsletters, popular magazines, and an upcoming reference textbook.

APPROVED PROGRAMS*

PI of 33 programs and CoI on an additional 52 programs for access to observing facilities such as the Hubble Space Telescope (PI of 4 programs awarded \$176k), Chandra X-ray Telescope (PI of 1 program awarded \$27k), 6.5m MMT telescope (PI of 7 programs, 16 nights), 6.5m Magellan telescope (PI of 8 programs, 16 nights), 8.2m Gemini N+S telescopes (PI of 5 programs, 28 hrs), Jansky Very Large Array (PI of 1 program, 1 hr).

IR&D grant (\$60k) from the Harvard-Smithsonian CfA to purchase four narrowband interference filters for the IMACS instrument on the Magellan Baade telescope.

Over 140 nights of experience observing on the 2.4m Hiltner telescope at MDM Observatory.

* Comprehensive list available upon request.

TEACHING EXPERIENCE

- Guest Lecturer, Harvard University** 2013
I reviewed the life cycles of supernova progenitor systems and relevant aspects of stellar evolution for one course: *Stellar Astrophysics* (Astro 120).
- Teaching Assistant, Dartmouth College** 2006-2011
Acted as substitute lecturer, led tutorial classes, contributed lesson material, conducted labs, and graded assignments and examinations in five courses: *General Physics* (Physics 3/4), *Exploration of the Solar System* (Astro 1), *Exploring the Universe* (Astro 2/3), *The Development of Astronomical Thought* (Astro 4), *Stars and the Milky Way* (Astro 15). I consistently received outstanding reviews from students.
- Ethics Training Facilitator, Dartmouth College** 2008-2009
Trained graduate students about proper conduct and ethics in scientific research in a weekly course. Topics covered the responsibilities of mentors and mentees, unfair discrimination, copyright rules, and fostering a healthy workplace atmosphere.
- Science Instructor, Westshire Elementary School** 2008-2009
Developed and ran inquiry-based lessons on *Introductory Astronomy* for fourth grade students in a rural Vermont elementary school as part of an NSF-funded science outreach program.
- Teaching Assistant, McMaster University** 2000-2004
Led tutorial classes, graded, acted as guest lecturer, and contributed course material in four courses: *Calculus of Science* (1A03), *Calculus* (for ArtSci majors, 1D06), and *Literature* (3A06). I was among the top 2% of undergraduates selected for these positions, and consistently received outstanding reviews from students.
- Science Education Training** 2000-2014
Extensive training on how to effectively teach mathematics and physics has been completed at the undergraduate, graduate, and postgraduate professional level via courses (*Teaching Mathematics* [Math 2U03] at McMaster; *Instruction in Teaching* [Physics 256] at Dartmouth), workshops (*Telling Your Story* at MIT), and past involvement with the *Dartmouth Center for the Advancement of Learning*.

SELECTED TALKS

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| Supernova Remnants: An Odyssey In Space After Stellar Death (invited, conference, scheduled) | 06/2016 |
| Harvard-Smithsonian CfA, High Energy Division (seminar, scheduled) | 12/2015 |
| “The Elegant Last Dance of Stars,” ISAS/JAXA, Japan (invited, workshop, scheduled) | 11/2015 |
| Harvard-Smithsonian CfA Observatory Nights, (invited, publically broadcasted talk) | 09/2015 |
| Dartmouth College (invited, seminar) | 09/2015 |
| IAU General Assembly XXIV (conference) | 08/2015 |
| Harvard University, REU review lecture (invited) | 07/2015 |
| American Museum of Natural History (invited, colloquium) | 05/2015 |
| Berklee College of Music (invited, public talk) | 03/2015 |
| Harvard-Smithsonian CfA, High Energy Division (seminar) | 11/2014 |
| National Optical Astronomy Observatory (invited, seminar) | 10/2014 |
| University of Arizona (invited, seminar) | 10/2014 |
| Harvard-Smithsonian CfA, Instit. For Theory and Comp. (seminar) | 03/2014 |
| Yukawa Instit. For Theoretical Phys. in Kyoto, Japan (conference) | 10/2013 |
| Seoul National University in Seoul, South Korea (invited colloquium) | 10/2013 |
| Harvard-Smithsonian CfA, Instit. For Theory and Computation (seminar) | 10/2013 |
| University of Texas, Austin (invited, symposium) | 09/2013 |
| Yale University (invited, seminar) | 09/2013 |
| North Carolina State University (conference) | 05/2013 |
| IAU Symposium 296 in Kolkata, India (conference) | 01/2013 |
| Osservatorio di Merate in Milan, Italy (invited, seminar) | 09/2012 |
| Max Planck Instit. for Astrophys. in Garching, Germany (conference) | 09/2012 |
| University of California, Santa Barbara (seminar) | 08/2012 |

University of Washington (workshop)	07/2012
Harvard-Smithsonian CfA, Institut. for Theory and Comp. (seminar)	03/2012
“Supernovae and their Host Galaxies,” CASS/AAO in Sydney, Australia (conference)	07/2011

MEDIA AND PUBLIC OUTREACH

Recipient of news media exposure

International press coverage for first author publications and programs I was PI of including:

- “Exploring a Star’s Death in 3D” (American Museum of Natural History, Science Bulletin, April 2015)
- “Cassiopeia A: The Surprise Inside an Exploding Star”(ABC News, February 2015)
- “Radioactive Bubbles May Have Punched Holes in Supernova’s Heart” (Space.com, February 2015)
- “Fiery star deaths may look different than we thought” (The Verge, February 2015)
- “CAT Scan of Nearby Supernova Remnant Reveals Frothy Interior” (CfA, January 2015)
- “Searching for Supernovae” (Harvard Crimson, April 2013)
- “Harvard students unveil the nature of the peculiar SN2012au” (Harvard University, April 2013)
- “The 27 Most Mind-Blowing Space Photos Of 2013 Will Put Your Life On Earth In Perspective” (Huffington Post, December 2013).

Additional press coverage for publications I contributed to including:

- “Strange Supernova is 'Missing Link' in Gamma-Ray Burst Connection” (NRAO, April 2015)
- “NASA’s Chandra Observatory Searches for Trigger of Nearby Supernova” (NASA, April 2014)
- “A Superluminous Supernova” (CfA, January 2014)
- “Superbright Supernovas’ Cause Potentially Revealed” (Space.com, October 2013)
- “Record-Breaking Stellar Explosion Helps Understand Far-Off Galaxy” (CfA, August 2012)
- “Explosive Stars with Good Table Manners” (CfA, March 2012)
- “Discovery of Three Irregular Neptunian Moons” (CfA, August 2004)
- “New moon for Uranus” (BBC News, October 2002)

Consultant and author of articles for popular science publications and facility newsletters

- “The Autumn Equinox is Here! Wait, What’s the Autumn Equinox?” (National Geographic, Sept 2015)
- “Revealing Core-Collapse Supernova Explosions with Webb” (STScI Newsletter, 2015, v2, in press)
- “Scientists study the interior of the Cassiopeia A supernova remnant” (*Serious-Science.org*, March 2015).
- “Bringing a Star’s Death to Life” (*Astronomy Magazine*, October 2014)

MISCELLANEOUS EXPERIENCE

- Referee for the *Astrophysical Journal* and *Letters, Astronomical Journal*, and *Astronomy and Astrophysics*.
- Peer reviewer for multiple 8-m class observational facilities.
- Representative on school councils at LSE (2004-2005) and Dartmouth College (2006-2011).
- Contributing editor for *Incite Magazine* (2000-2004).

HONORS AND AWARDS

Hannah Croasdale Award (selected from graduating PhD class, \$1k)	2011
Dartmouth College Dept. of Physics and Astronomy Teaching Award	2008
NSERC Post-Graduate Scholarship (selected nationally, 2 yr, \$42k)	2007-2009
Filene Teaching Award (selected from entire graduate student population, \$1k)	2007
Commonwealth Scholarship (selected internationally, \$50k)	2004
Dr. Harry Lyman Hooker Scholarship (\$1k)	2002
Edwin Marin Dalley Memorial Scholarship	2001
NSERC Summer Research Award (3 yr, \$13.5k)	2001-2003
Physics Entrance Award (selected from McMaster students)	1999
George and Nora Elwin Scholarship (selected internationally, \$25k)	1999-2003
Dofasco F. A. Sherman Memorial Scholarship (selected regionally, \$10k)	1999-2003

Total funding from grants and awards received: \$406,500.