Curriculum Vitae
Dana I. Casetti

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Education

• Ph.D. 1998, Astronomy, Yale University, New Haven, CT (advisors: William van Altena, Robert Zinn)
• M.S., M.Phil., 1993, 1994, Astronomy, Yale University, New Haven, CT
• M.S. Physics, 1987, University of Bucharest, Romania

Current and Previous Positions

2013 - current Assistant Professor - Physics, Southern Connecticut State University
2011 - current Research Scientist - Astronomy, Yale University
2001 - 2010 Associate Research Scientist - Astronomy, Yale University
2007 - 2009 Visiting Assistant Professor - Astronomy, Wesleyan University
1998 - 2001 Postdoctoral Scholar - Astronomy, University of Virginia (advisor: Steve Makewski)
1992 - 1998 Research and Teaching Assistant - Astronomy, Yale University
1991 - 1992 Research Associate, Astronomical Institute of the Romanian Academy, Bucharest, Romania
1987 - 1990 Physics Teacher - Dumbraveni High School, Romania

Research Interests

• Formation/structure of the Milky Way (MW) and its satellites in a cosmological context
• 3D kinematics of MW main components
• large surveys, optical astrometry, absolute proper motions of MW satellites, clusters
• internal motions in clusters, MW satellites as determined from tangential velocities

Research Participation/Projects

• Member of the LSST science collaboration "Milky Way and Local Volume Structure"

and of the "Differential Astrometry Working Group".
• Member of the SDSS III/ SEGUE 2 team.
• Member of the Astrometry/Galactic structure team of the Yale/WIYN One Degree Imager Survey *(www.astro.yale.edu/odisurvey)* and of the ODI Commissioning working group.
• Co-PI and PI on the Southern Proper-Motion Project (SPM, based at Yale U.), an astrometrically designed program to determine absolute proper motions of millions of objects south of Dec =-15 deg, to a limiting magnitude of 18 *(www.astro.yale.edu/astrom, www.astro.yale.edu/dana/gc.html)*. This program measured 55% of the globular clusters with such determinations and the motions of the Magellanic Clouds and Sagittarius dwarf galaxy.
• PI on the Kapteyn Selected Area Project (based at Yale U. and in collaboration with UVa), which is designed to obtain absolute proper motions to a limiting magnitude of V = 20, and in some fields to V = 22 along three declination zones in some fifty 40x40 arcmin fields. Spectroscopic and photometric follow-up observations in these fields are done at UVa and Yale. This program is designed to characterize tidal streams and overdensities in the Galaxy's halo. To date, it has provided the most accurate proper motions in known tidal streams and overdensities. It has also been used to assess systematic and random proper-motion errors in SDSS DR7 and DR9.

Funded Research Programs

Grants since 2000 include $694,690 as Principal Investigator, from a total of $\sim$ $1.7 mill. as PI and Co-PI.

• NSF AST10-44811,($20,060) - PI - *RAPID Response Research: Replacement Camera Cooling System for the YSO Astrograph*
• NSF AST09-08996,($367,268) - PI - *The Milky Way in 3D Velocity Space: A View from the Southern Hemisphere*
• NSF AST04-06884,($280,263) - PI - *Probing Phase-Space Structure in the Galaxy- Kaptey's Selected Areas*
• NSF AST04-07293,($496,622) - Co-PI *Structure of the Milky Way from Kinematical Databases*
• NSF AST04-07292,($255,000) - Co-PI *Absolute Proper Motions of the Magellanic Clouds and Milky Way Globular Clusters*
• NSF AST00-98687,($219,471) - Co-PI *Orbits of Milky Way Globular Clusters and Satellite Galaxies*
• Hubble Space Telescope AR-8739, 2000 ($27,099) - PI - *Absolute Proper Motion of the Fornax Dwarf Spheroidal*

Teaching and Public Outreach

• Courses taught at Southern Connecticut State University: Optics and Optical Detectors 530, Modern Physics Laboratory 370, Physics for Scientists and Engineers Laboratory

230, 231.
• Courses designed and taught at Wesleyan University: Descriptive Astronomy 105 (three semesters: 2007-2009) and Galactic Astronomy 221/521 (two semesters, 2007-2009).
• Lecturer at the "Workshop on Basic Astrometric Methods" - Yale U., July 2005.
• Lecturer at the 2005 Michelson Summer School: "Discovering New Worlds Through Astrometry" - Cal. Tech., July 2005.
• Invited Speaker at the conference "Astrophysics, Dynamical Systems and Fractals: Past and Future" - U. of Bucharest, Romania, April 2007; roundtable discussions involved the future of education and research in astrophysics in Romania.
• Board member at the Conference "Diaspora in Cercetarea Stiintifica si Invatamantul Superior din Romania: Astronomia Romaneasca in Contextul Mondial Actual", Bucharest, Romania, Sept. 2010. The purpose of this Conference is to revive the field of Astronomy in Romania, including the aspects of research, teaching and public outreach.

Advisees

• Graduate student Jeff Carlin (Ph.D. thesis: 2004-2010, UVa, in collaboration with S. Majewski; now a postdoc at Rensselaer Polytechnic Institute)
• Graduate student Kathy Vieira (Ph.D. thesis and other research projects: 2002-2009, Yale U., in collaboration with W. F. van Altena and T. M. Girard; now at Centro de Investigaciones de Astronomia - Venezuela.)
• Undergraduate student Brian Keeney (M.S. thesis 1999-2001, in collaboration with S. Majewski; now at Center for Astrophysics and Space Science, University of Colorado)

Observing/Technical Experience

• **Astronomical Observing:** imaging/CCD photometry - CTIO 0.9m, MiniMo, OPTIC on WIYN 3.5m, MOSAIC on KPNO 0.9m, speckle interferometry, photographic - El Leoncito, Argentina: 76cm and YSO 50cm double astrograph, spectroscopy - HYDRA on WIYN 3.5m.
• **Software/Data Reduction:** developed the software (FORTRAN with graphics interface and various C libraries in a UNIX environment) that controls and acquires the data from the PDS microdensitometer (UVa) for the precise astrometric measurement of photographic plates. Extensive FORTRAN programming for scientific analysis and instrumentation, programming and shell scripting with standard astronomical image-processing packages IRAF, FOCAS, SEXTRACTOR. Developed a pipeline for astrometric reductions of 2.5m Du Pont, 60inch Mt. Wilson and POSS I plates/scans for the Kapteyn project.

Professional Affiliations

AAS; IAU

Awards

• Dirk Brower Memorial Prize in Astronomy - Yale University, May 2000
• Division on Dynamical Astronomy of the American Astronomical Society Raynor L. Duncombe Student Prize for student research 1997

Service to the Astronomical Community

• Member of the NSF review panel for the Galactic Astronomy Division, 2005
• Member of the SOC for the Conference "Omega Centauri, A Unique Window into Astrophysics" - Cambridge, UK, July 2000
• Selected colloquium talks: Georgia State U. (March 2012), Case Western Reserve U. (2011), University of Virginia (2010), Pontificia U. Catolica - Chile (2010), U. de Chile - (2010), U. National de San Juan - Argentina (2010), Wesleyan U. (2009, 2006), USNO DC (2006), Southern CT State U. (2009), UMass at Dartmouth (2005)
• Referee for articles in AJ, ApJ, MNRAS, A&A (1999 - present)
• Organizer of the Astronomy Department colloquium talks at Yale U. (Sept. 2004 - June 2005)

Publications

• 39 papers in refereed journals of which 20 as 1st author, and 6 as 2nd author (see Publication list)

References

Steve Majewski, Univ. of Virginia, Dept. of Astronomy, srm4n@Virginia.edu, 804-924-4893
William F. van Altena, Yale Univ., Astronomy Dept., william.vanaltena@yale.edu, 203-432-3020
Robert Zinn, Yale Univ., Astronomy Dept., robert.zinn@yale.edu, 203-432-3017