

Michele Trenti

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Education

- Ph.D. Physics, Scuola Normale Superiore, Pisa (Italy), *summa cum laude*, 9/2005
- M.Sc. Physics, Scuola Normale Superiore, Pisa (Italy), *summa cum laude*, 11/2002
- B.Sc. Physics, University of Pisa (Italy), *summa cum laude*, 11/2001

Academic Positions

- From 10/2005: Postdoctoral Fellow at STScI.
- 4/2005-8/2005: Visiting Fellow, Yukawa Institute for Theoretical Physics, Kyoto, Japan.

Grants

- **PI:** HST Cycle 16 Archival Theory (2007) “Intermediate Mass Black Holes in Globular Clusters: Key Photometric fingerprints”, **\$85,907**.
- **PI:** HST Cycle 15 Archival Theory (2006) “Dynamical evolution of galaxy bulges: harassment, tidal streams and interactions with globular clusters”, **\$60,153**.
- **PI:** NCSA-Teragrid Award AST060032T (2006), **20,000 Cpu Hours**.

Honors and Awards

- 2001: **Outstanding Graduate Award**, University of Pisa (Italy): medal and cash award equivalent to one year of tuition fees.
- 1997 - 2001: **Fellowship** (all tuitions fees and living expenses covered) at Scuola Normale Superiore, Pisa (Italy).

Other Research Experience

- 6/2003 - 9/2003: Internship at **Deutsche Bank, London (UK)** within the DB-Analytics team. Developed a stochastic volatility model to price fixed income derivatives.

Service

- SOC member and LOC co-chair of IAU Symposium 246, “Dynamical Evolution of Dense Stellar Systems”, 5-9 September 2007, Capri-Italy
- SOC member of STScI 2007 Spring Symposium: “Black Holes”, April 23-27, 2007, Baltimore, MD

Supervision of students

- From 2007: Mike Gill, astronomy graduate student at University of Maryland, College Park; co-supervisor Prof. M. Coleman Miller - UMD.

Selected Talks

- 2007: “From PopIII stars to high redshift galaxies” at ETH Zurich; KIPAC Stanford; Columbia U; UC Santa Barbara; U Colorado Boulder.
- 2007: “Cosmic Variance and Luminosity Function Measurements in Deep High z surveys” at STScI.
- 2007: “The very first Pop III stars and their relation to bright $z \approx 6$ quasars” at “First Stars III” Santa Fe, NM; “A Century of Cosmology”, Venice, Italy.
- 2007: “Dynamical Evolution of Star Clusters with Primordial Binaries and Intermediate Mass Black Holes” at UMD College Park Colloquium; IAU Symposium 246, Capri, Italy; AAS DDA Meeting, Ann Arbor, MI; JHU.
- 2006: “Incomplete Violent Relaxation of Collisionless Stellar Systems”, AAS Dissertation talk.

References

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Prof. Giuseppe Bertin [PhD Advisor]
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Prof. Douglas Hoggie
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Refereed Publications

- 15 “N-body Simulations”, Hut, P. and **Trenti, M.**, invited review for the Scholarpedia Encyclopedia of Astrophysics (http://www.scholarpedia.org/article/N-body_Simulations)
- 14 “Tidal disruption and global mass function in star clusters”, **Trenti, M.**, ApJL submitted
- 13 “Predictions for Triple Stars and Pulsar Triples in Star Clusters”, **Trenti, M.**; Ransom, S.; Heggie, D.C. and Hut, P., MNRAS submitted
- 12 “Cosmic Variance and Its Effect on the Luminosity Function Determination in Deep High z Surveys”, **Trenti, M.** and Stiavelli, M., ApJ, in press (astro-ph/0712.0398)
- 11 “Distribution of the Very First Population III Stars and Their Relation to Bright $z \approx 6$ Quasars”, **Trenti, M.** and Stiavelli, M., 2007, ApJ, 667, 38
- 10 “The UDF05 Follow-up of the HUDF: I. The Faint-End Slope of the Lyman-Break Galaxy Population at $z \approx 5$ ”, Oesch, P. A.; Stiavelli, M.; Carollo, C. M.; Bergeron, L. E.; Koekemoer, A. M.; Lucas, R. A.; Pavlovsky, C. M.; **Trenti, M.**; Lilly, S. J.; Beckwith, S. V. W.; and 7 coauthors, 2007, ApJ, in press (astro-ph/0706.2653)
- 9 “Star clusters with primordial binaries - III. Dynamical interaction between binaries and an intermediate mass black hole”, **Trenti, M.**; Ardi, E.; Mineshige, S. and Hut, P., 2007, MNRAS, 374, 857
- 8 “Star clusters with primordial binaries - II. Dynamical evolution of models in a tidal field”, **Trenti, M.**; Heggie, D.C. and Hut, P., 2007, MNRAS, 374, 344
- 7 “Dust Absorption Along the Line of Sight for High-Redshift Objects”, **Trenti M.** and Stiavelli, M., 2006, ApJ, 651, 704
- 6 “Neutral Gas Density in Damped Ly α Systems”, **Trenti M.** and Stiavelli, M., 2006, ApJ, 651, 51
- 5 “Star clusters with primordial binaries - I. Dynamical evolution of isolated models”, Heggie, D.C.; **Trenti, M.** and Hut, P., 2006, MNRAS, 368, 677
- 4 “Partial Suppression of the Radial Orbit Instability in Stellar Systems”, **Trenti, M.** and Bertin, G., 2006, ApJ, 637, 717
- 3 “A family of models of partially relaxed stellar systems. II. Comparison with the products of collisionless collapse”, **Trenti, M.**; Bertin, G. and van Albada, T.S., 2005, A&A, 433, 57
- 2 “A family of models of partially relaxed stellar systems. I. Dynamical properties”, **Trenti, M.** and Bertin, G., 2005, A&A, 429, 161
- 1 “Thermodynamic Description of a Family of Partially Relaxed Stellar Systems”, Bertin G. and **Trenti, M.**, 2003, ApJ, 584, 729