

CURRICULUM VITAE

ORLY GNAT

PERSONAL

- **Name:** Orly Gnat
- **Current Address:** Theoretical Astrophysics,
California Institute of Technology, MC 350-17,
Pasadena, CA 91125
- **Phone numbers:** Office: +1 (626) 395 6838
Fax: +1 (626) 796 5675
Home: +1 (626) 396 1174
- **E-mail:** orlyg@tapir.caltech.edu
- **Born:** September 5, 1976, Israel
- **Family status:** Married + 1

EDUCATION

- **2002 – 2008:** Ph.D., School of Physics and Astronomy, Tel-Aviv University, Israel
Subject: Non-Equilibrium Metal-Ionization in Cosmological Environments:
Conduction Fronts, Radiatively Cooling Gas, and Fast Shocks.
Advisor: Prof. Amiel Sternberg
- **2005 – 2008:** Visiting Graduate Student, California Institute of Technology
- **1994 – 1997:** B.Sc., Magna Cum Laude, in Physics and Computer Science, Tel Aviv University, Israel

POSITIONS & EMPLOYMENT

- **2008 – present:** Chandra Fellow, Theoretical Astrophysics, Caltech
- **2002 – 2005:** Tel Aviv University, School of Physics and Astronomy, Teaching Assistant
- **1997 – 2002:** Military Service (Operations Research Officer. Rank: Captain)

HONORS AND AWARDS

- **2010:** Women in Science Prize, for outstanding Israeli PhD Graduates in the Exact and Natural Sciences
- **2008:** Chandra Fellow
- **2006:** The John Bahcall Astrophysics Prize for Excellence in Research (at Tel-Aviv University)
- **2006:** Rector's Award for Excellence in Teaching
- **2006:** School of Physics and Astronomy Award for Excellence in Teaching
- **2005:** The Ilan Ramon Scholarship for Outstanding Academic Achievements (A National Israeli Fellowship)
- **2005:** School of Physics and Astronomy Award for Excellence in Teaching
- **2005:** Dean's Commendation for Public Outreach Activity
- **1997:** The Dean's Honor List
- **1996:** The Dean's Honor List

PARTICIPATION IN SCIENTIFIC MEETINGS

- **2009:** 'Astrophysics at the Extreme', Jerusalem, Israel.
- **2009:** 'Missing Baryons, Accretion, and Feedback in Galaxies', Sydney, Australia (contribution: Two Posters).
- **2009:** 'Einstein Fellows Symposium', Boston, MA (contribution: Talk).
- **2009:** 'Theoretical Astrophysics in Southern California 2009' – Los Angeles, CA (Contribution: Talk).
- **2008:** 'Chandra Fellows Symposium', Boston, MA (contribution: Talk).
- **2008:** 'Theoretical Astrophysics in Southern California 2008' – Irvine, CA (Contribution: Talk).
- **2008:** 'Galaxy Evolution' Workshop – Jerusalem, Israel (Contribution: Talk).
- **2008:** 4th Irvine Center for Cosmology Workshop: 'Galaxy Formation and Evolution as Revealed by Cosmic Gas' – Irvine, CA (Contribution: Talk).
- **2007:** AAS 210th meeting – Honolulu, Hawaii (Contribution: Talk).
- **2006:** 'Theoretical Astrophysics in Southern California 2006' – UC Santa Barbara, CA, (Contribution: Talk).

- **2006:** 'Active Galactic Nuclei: From Atoms to Black Holes' – Tel Aviv, Israel.
- **2004:** 'Extra-Planar Gas' – Dwingeloo, The Netherlands (Contribution: Talk).
- **2004:** 'The Origin of Galaxies' winter school – Jerusalem, Israel.
- **2003:** 'Galaxy Formation' Workshop – Jerusalem, Israel (Contribution: Talk).

SEMINARS AND COLLOQUIA:

- **2010:** *Non -Equilibrium Ionization Processes in Metal Ion Absorbers*, The University of Chicago, April 2010.
- **2009:** *Equilibrium Configurations of Synchronous Binaries and Applications to the Kuiper Belt*, Weizmann Institute of Science, December 2009.
- **2009:** *Equilibrium Configurations of Synchronous Binaries and Applications to the Kuiper Belt*, Tel-Aviv University, December 2009.
- **2009:** *Equilibrium Configurations of Synchronous Binaries and Applications to the Kuiper Belt*, The Technion, December 2009.
- **2008:** *Non -Equilibrium Ionization in Metal Ion Absorbers and in Post-Shock Cooling Layers*, UC Berkeley, August 2008.
- **2008:** *Non -Equilibrium Ionization in Metal Ion Absorbers and in Post-Shock Cooling Layers*, Hebrew University of Jerusalem, May 2008.
- **2008:** *Metal Ionization in Radiatively Cooling Gas and in Fast Shocks*, The Technion, December 2008
- **2007:** *Non -Equilibrium Ionization in Metal Ion Absorbers*, Weizmann Institute of Science, October 2007.
- **2007:** *Non -Equilibrium Ionization in Metal Ion Absorbers*, California Institute of Technology, September 2007.
- **2007:** *Non -Equilibrium Ionization in Metal Ion Absorbers*, Institute for Theory and Computation - Harvard-Smithsonian Center for Astrophysics, May 2007.
- **2007:** *Non-Equilibrium Ionization in Metal Ion Absorbers*, Space Telescope Science Institute, May 2007.
- **2007:** *From High-Velocity Clouds to the Warm-Hot Intergalactic Medium: Non-Equilibrium Ionization in Metal Ion Absorbers*, Tel-Aviv University, January 2007.
- **2006:** *From High-Velocity Clouds to the Warm-Hot Intergalactic Medium: Equilibrium and Non-Equilibrium Ionization in Metal Ion Absorbers*, Institute for advanced Study, Princeton, May 2006.
- **2004:** *Ionization of Metals in Low-Mass Mini-halos*, Tel-Aviv University, November 2004.

- **2004:** *Ionization of Metals in Low-Mass Minihalos*, UC Berkeley, September 2004.

OTHER PROFESSIONAL ACTIVITIES:

- **Referee:** Monthly Notices of the Royal Astronomical Society, The Astrophysical Journal
► **Member,** American Astronomical Society (AAS) 2007-2008

LIST OF PUBLICATIONS

REFEREED JOURNALS

8. **Gnat, O.**, & Sari, R., (2010), *Equilibrium Configurations of Synchronous Binaries: Numerical Solutions and Application to Kuiper-Belt Binary 2001 QG₂₉₈*, ApJ 719, 1602.
7. **Gnat, O.**, Sternberg, A., and McKee, C. F. (2010), *Metal Absorption in Conductively Evaporating Clouds*, ApJ 718, 1315.
6. Simon, J. D.; Gal-Yam, A. **Gnat, O.**, et al. (2009), *Variable Sodium Absorption in a Low-extinction Type Ia Supernova*, ApJ, 702, 1157
5. **Gnat, O.** & Sternberg, A., (2008), *Metal Absorption Column Densities in Fast Radiative Shocks*, ApJ, 693, 1514.
4. Chelouche, D., Ménard, B., Bowen, D. V., **Gnat, O.** (2008), *On the Connection Between Metal Absorbers and Quasar Nebulae*, ApJ 683, 55.
3. **Gnat, O.** & Sternberg, A., (2007), *Time-Dependent Ionization in Radiatively Cooling Gas*, ApJS, 168, 213.
2. **Gnat, O.** & Sternberg, A., (2004), *Photoionized Gas in Dark Matter Minihalos in the Galactic Halo and Local Group*, ApJ, 608, 229.
1. Mazeh, T., Latham, D. W., Goldberg, E., Torres, G., Stefanik, R. P., Henry, T. J., Zucker,

S., **Gnat, O.**, Ofek, E. O. (2001), *Studies of multiple stellar systems - IV. The triple-lined spectroscopic system Gliese 644*, MNRAS, 325, 343

CONFERENCE PROCEEDING

2. Gnat, O. & Sternberg, A., (2007), *Time-Dependent Radiative Cooling*, in AAS Meeting Abstracts, 210, 113.08.

1. Gnat, O. & Sternberg, A., (2005), *Photoionized Gas in Dark Matter Minihalos in the Galactic Halo and Local Group*, in APS Conf. Ser. 331: Extra-Planar Gas, 331, 97, Ed. Robert Braun.