

# ARTI GARG

## EDUCATION

**Harvard University** Cambridge, Mass., U.S.A. • Ph.D. in Physics, 2008

**University of Washington** Seattle, Wash., U.S.A. • M.S. in Physics, 2002

**Stanford University** Stanford, Calif., U.S.A. • M.S. in Aeronautical & Astronautical Engineering, 2001

**Stanford University** Stanford, Calif., U.S.A. • A.B. in English and B.S. in Physics, January 2000

- *Overseas Study*: Stanford-in-Oxford, Oxford, United Kingdom, Spring 1998

## EXPERIENCE

**House Committee on Foreign Affairs; Subcommittee on Terrorism, Nonproliferation and Trade**  
(October 2009–Present)

### *Legislative Science Fellow*

- Serve as American Association for the Advancement of Science Congressional Fellow sponsored by the American Physical Society.
- Provide legislative support on foreign affairs issues including nuclear proliferation, bioterrorism, aerospace export controls, space policy, counterterrorism, labor rights, and meetings with foreign dignitaries and a head-of-state.
- Coordinate Congressional hearings, including drafting opening statements, preparing background materials and recommended questions, and identifying witnesses.
- Make recommendations on and draft legislation.
- Meet with outside stakeholders on legislative issues and work with relevant Federal agencies.
- Organized a series of staff briefings on nuclear energy programs.

**Lawrence Livermore National Laboratory** (May 2008–September 2009)

### *Post Doctoral Research Staff Member*

#### *Institute for Geophysics and Planetary Physics*

- Conducted detection efficiency analysis of the SuperMACHO project.
- Conducted research on time-varying sources mined from the SuperMACHO data set including variable stars and supernovae. First author on a refereed publication resulting from this work.
- Delivered 6 public scientific seminars or talks at universities, national research laboratories, and international conferences.

#### *Center for Global Security Research*

- Performed feasibility analysis and technology review for next generation persistent surveillance camera.

**Harvard University – The SuperMACHO Project** (2003–2008)

### *Graduate Research Fellow*

- Developed and implemented a software pipeline for analysis of a multi-terabyte set of astronomical data used to search for gravitational lensing due to “Dark” Matter in the Milky Way. Contributions include:
  - Developing statistical and analytical software tools for modeling and describing the time-varying properties of astrophysical sources.
  - Developing software to simulate multiple classes of astrophysical variables to determine project’s detection efficiency.
  - Developing visualization tools for data products.
  - Verification of image processing software.
- Developed and carried out an astronomical observing program at facilities in Chile to obtain additional information on scientifically interesting sources mined from the SuperMACHO data set.
- Drafted multiple successful proposals for securing observing time at world-class telescope facilities in Chile.
- Drafted end-of-observations project summary and progress report for presentation to the committee in charge of overseeing the survey program through which this project was granted observing time.
- Played a lead role in ensuring communication within a 20 person collaboration with members from six different institutions and in three different countries.
- First or co-author on 13 refereed publications and 32 circulars, conference proceedings, and posters on SuperMACHO and related projects.
- Delivered 2 public talks on this research at international scientific meetings.

### **The National Academies** (Fall 2003)

#### ***Christine Mirzayan Science and Technology Policy Graduate Fellow***

- Worked with the President of the National Academy of Sciences to write a proposal for an InterAcademy Council study to examine indicators for measuring science and technology capacity in developing nations.
- Researched and wrote the majority of a 60-page appendix to, generated ideas for, and created figures included in a study report on Major Research Facility funding priorities at the National Science Foundation.
- Moderated and worked with three other interns to organize a seminar on policies of the Food and Drug Administration regarding clinical drug trials.

### **GetFit.COM** (2000)

#### ***Product Development Engineer; Content Manager***

- Designed and implemented databases in Microsoft Access to track Content department work flow and to systematize Customer Service emails.
- Researched and made recommendations on adapting new technologies.
- Served as liaison communicating requirements between Content and Engineering departments.

### **DaimlerChrysler Corporation** (Summer 1999)

#### ***Jeep & Truck Base Engine, Summer Engineering Intern***

- Analyzed results of a valvetrain temperature study used to determine the cause of engine failures during testing.
- Designed and conducted initial phases of a study correlating oil change intervals in different test platforms.
- Coordinated retrofit program for approximately 100 V6 and V8 engines at test facilities worldwide.

## ADDITIONAL COURSES AND TRAINING

**National Virtual Observatory Summer School** September 2008 • US National Virtual Observatory, *Santa Fe, N.M. U.S.A.*

**Summer School in Cosmology and Astroparticle Physics** July 2006 • Abdus Salam International Centre for Theoretical Physics, *Trieste, Italy*

**Summer School in Statistics for Astronomers and Physicists** June 2006 • Pennsylvania State University, *State College, Pa. U.S.A.*

**Wilderness Emergency Medical Technician** Summer 2001 • Wilderness Medicine Institute of the National Outdoor Leadership School, *Midpines, Calif. U.S.A.*

## GRANTS, HONORS, AND AWARDS

**Chambliss Astronomy Student Achievement Award**, Graduate Student Medal Winner, 2007

- Awarded to two graduate students by the American Astronomical Society for poster presentation of outstanding graduate research at the society's annual meeting.

**Sebastian Karrer Prize**, 2003

- Awarded to three graduate students by the University of Washington, Department of Physics for outstanding graduate work in the first three years of study.

**Washington State–NASA Space Grant Fellow**, 2001–2002

**Fellow of the Stanford University School of Engineering**, Department of Aeronautical and Astronautical Engineering, 2000–2001

**Phi Beta Kappa**, Beta Chapter of California at Stanford University, Inducted 2000

**Undergraduate Student Commencement Speaker**, Department of Physics, Stanford University, 1999

**Undergraduate Research Opportunities Grant**, Summer 1998

- Awarded to conduct independent research on film adaptations of Shakespeare at the British Film Institute.

**Three Honorable Mentions for Technical Direction from the American College Theater Foundation regional competition**, 1998

## EXTRACURRICULAR AND VOLUNTEER ACTIVITIES

**University of Washington, Department of Physics**, *Seattle, Wash. U.S.A.*

- Physics Graduate Student Council, Founding member, 2003
- Graduate student representative to Faculty meetings, 2002–2003

**Lucille Packard Children's Hospital**, *Palo Alto, Calif. U.S.A.*

- Volunteer to perform ALGO hearing tests on infants in intensive care units, May 2000–June 2001

**Ram's Head Theatrical Society**, Stanford University, *Stanford, Calif. U.S.A.*

- Technical Director, Original Winter One Acts, 1997–1998
- Director, Original Winter One Acts, 1996–1997
- Assistant Director, Original Winter One Acts, 1995–1996