

CITA Canadian Institute for
Theoretical Astrophysics



INCORPORATED 1986

Institut canadien
d'astrophysique théorique **ICAT**

ANNUAL GENERAL MEETING

2008

Victoria

21 May 2008

AGENDA

1. **Highlights 2007-2008**
2. **CITA Current Snapshot**
3. **National Programs**
 - a. National Fellows
 - b. Senior Visiting Fellows / Sabbatical Visitors
 - c. Predoctoral Program
 - d. Graduate Students
 - e. Summer Undergraduates
 - f. Computational Undergraduate Students
4. **CITA Activity**
 - a. CITA Exchange Programs
 - b. Sackler Lecture
 - c. Meetings Supported in 2007-2008
 - d. Awards
 - e. Scientific Contributions
 - f. CITA web site
 - g. CITA web casting
 - h. Support for visits by CITA fellows
 - i. Colloquia and Seminars
 - j. Weekly Astro-ph Meetings
5. **New Membership Applications
Renewal of Membership**

1. Highlights 2007-2008

PERSONNEL

- **Dick Bond**, Sabbatical 2007-2008
- **Norman Murray**, Director. Will be on sabbatical 2008-2009
- **Lev Kofman**, Associate Director. Will be Acting Director 2008-2009.
- **Chris Thompson**, Sabbatical 2007-2008
- **Ue-li Pen**, Will be Associate Director 2008-2009
- **Peter Martin**, Chair, DAA

RECRUITING

- **3** PDFs/SRAs and **3** CITA National Fellows recruited for 2008/2009
- **4** PDFs/SRAs and **2** CITA National Fellows recruited in 2007/2008
- **10** PDFs/SRAs and **2** CITA National Fellows recruited in 2006/2007
- **9** PDFs/SRAs and **2** CITA National Fellows recruited in 2005/2006

AWARDS

- **Bond**: Order of Ontario Jan. 2008
 - 2007 Alexander von Humboldt---Germany's highest award for non-German scientists
- **Kofman**: American Physical Society Fellow
 - 2006 Alexander von Humboldt---Germany's highest award for non-German scientists
- **Martin**: Fellow, Royal Society of Canada

COMPUTING

- **Mike Seymour** parallel programmer
- **Chris Loken** has moved to SciNet as of April 2008
- **Sunnyvale (200x8core machine)** Dec. 2006

2. CITA Current Snapshot

NEW RESEARCH FELLOWS (Sept 2007)

178 applications for positions

- **BARNABY, Neil** PDF. Ph.D. McGill University, 2007. Research area: high energy theory
- **BRODERICK, Avery** SRA. Ph.D. Caltech, 2004. Research area: compact object physics and star formation
- **COMPEIGNE, Mathieu** PDF. Ph.D. Institut Astrophysique Spatiale, 2007. Research area: interstellar matter, interstellar dust
- **CHELOUCHE, Doron**, PDF. Ph.D. Tel-Aviv University, 2007. Research area: quasars and galaxies

CITA Current Snapshot...

TO PERMANENT POSITIONS:

- **LITHWICK, Yoram**, Faculty position, University of Chicago
- **IVANOVA, Natasha**, CRC Tier II, University of Alberta, deferred for one year (currently in negotiation)
- **BALLANTYNE, David**, Faculty position, Georgia Tech

TO OTHER POSITIONS:

- **KESDEN, Mike**, PDF, Caltech
- **YAN, Huirong**, TAP Prize PDF, University of Arizona
- **PFROMMER, Christoph**, Promoted to CITA SRA
- **PROKUSHKIN, Sergey**, Imaging R&D Engineer, Micron Technology, Inc.
- **SHIROKOV, Alex**, "Quantitative Analyst" at OANDA corporation
- **JAPPSSEN, Katrina**, PDF, University of Cardiff, Wales
- **FRANCE, Kevin**, Research Associate, University of Colorado

75% of former CITA research associates are in permanent academic or research positions (90)

14% are in PDF positions poised for faculty positions (includes current PDFs at CITA)

11% have left the field – most are in industry

CITA Current Snapshot...

INCOMING CITA FELLOWS (September 2008)

189 applications for positions

- **CHULBA, Jens**, PDF. Ph.D. MPA-Garching/LMU Munich (2005). Research area: Theoretical Cosmology/CMB
- **BROWNING, Matt**, PDF. Ph.D. JILA, U. Colorado-Boulder (2005). Research area: Astrophysics
- **LEVINE, Robyn**, PDF. Ph.D. University of Colorado (2008). Research area: Galaxy Evolution and Supermassive Black Holes

OTHER INCOMING FELLOW (September 2008)

- **BECA, Luis**, PDF. Supervised by Ue-li Pen. Funded by Fundação para a Ciência e Tecnologia

CITA Current Snapshot...

	CITA FACULTY	
<i>Stanford University</i>	BOND, Dick (CMB , LSS, early universe)	
<i>University of Hawaii</i>	KOFMAN, Lev (early universe, LSS)	<i>Associate Director</i>
<i>University of Toronto</i>	MARTIN, Peter (ISM)	<i>Chair, DAA</i>
<i>Caltech</i>	MURRAY, Norm (solar system, AGN)	<i>Director, CRC Tier I</i>
<i>Harvard University</i>	PEN, Ue-li (LSS, hydro)	
<i>University of North Carolina</i>	THOMPSON, Chris (high energy)	
	PDFs/SRAs	
<i>McGill University</i>	BARNABY, Neil	
<i>University of Toronto</i>	BLAGRAVE, Kevin (P. Martin)	
<i>Princeton University</i>	BOYLE, Latham	
<i>Max Planck Institute</i>	BRAITHWAITE, Jon (1/2 Thompson)	
<i>CFA</i>	BRODERICK, Avery (SRA)	
<i>UC Berkeley</i>	CHANG, Tzu Ching	<i>Joint IAA/CITA Fellowship</i>
<i>IAS (Princeton)</i>	CHELOUCHE, Doron (N. Murray)	
<i>IAS-Paris</i>	COMPIEGNE, Mathieu	
<i>Princeton University</i>	DALAL, Neal (SRA)	
<i>Princeton University</i>	DORE, Olivier (SRA)	
<i>University of Chicago</i>	DURSI, Jonathan (SRA)	
<i>Australia</i>	FISCHERA, Joerg (P. Martin)	
<i>John Hopkins University</i>	FRANCE, Kevin (P. Martin)	<i>University of Colorado</i>
<i>Northwestern University</i>	IVANOVA, Natasha	<i>Alberta</i>
<i>Potsdam</i>	JAPPSEN, Katharina	<i>University of Cardiff</i>
<i>Caltech</i>	KESDEN, Mike	<i>Caltech</i>
<i>UC Berkeley</i>	LITHWICK, Yoram (1/2 Murray)	<i>Chicago (faculty)</i>
<i>University of Toronto</i>	MacTAVISH, Carrie (Bond)	
<i>Princeton University</i>	McDONALD, Pat (SRA)	
<i>IAS (Preinceton)</i>	MENARD, Brice (SRA)	
<i>IAP</i>	NISSANKE, Samaya	
<i>Princeton University</i>	NOLTA, Mike	
<i>Max Planck Institute</i>	PFROMMER, Christoph	<i>Promoted to CITA SRA</i>
<i>Stanford University</i>	PROKUSHKIN, Sergey	<i>Micron Technology, Inc.</i>
<i>MIT</i>	SHIROKOV, Alex	<i>OANDA corporation</i>
<i>Caltech</i>	SIEVERS, Jonathan (SRA)	<i>Bond</i>
<i>University of Wisconsin-Madison</i>	YAN, Huirong	<i>University of Arizona</i>
<i>Princeton University</i>	YOUDIN, Andrew	

CITA Current Snapshot...

CITA Alumni in Permanent or Tenure-Stream Positions

- P. Armitage, Assistant Professor, Dept. of Astrophysical & Planetary Science, University of Colorado
- P. Arras, Assistant Professor, Dept. of Astronomy, University of Virginia
- K. Ashman, Assistant Professor, Dept. of Physics, Baher University
- A. Babul, Professor, Dept. of Physics and Astronomy, University of Victoria
- D. Ballentyne, Assistant Professor, Dept. of Physics, Georga Tech
- R. Barkana, Senior Lecturer, Tel Aviv University
- J. Barnes, Professor, Institute for Astronomy, University of Hawaii, USA
- P. Barnes, Staff Scientist, NRAO, Socorro, New Mexico, USA
- S. Basu, Assistant Professor, Dept. of Physics & Astronomy, University of Western Ontario
- A. Beloborodov, Associate Professor, Dept. of Astronomy, Columbia University
- F. Bernardeau, ingénieur CEA, Service de Physique Théorique, Saclay, France
- L. Binette, Associate Professor, UNAM, Instituto de Astronomia, Mexico City, Mexico
- O. Blaes, Associate Professor, Dept. of Physics, University of California, Santa Barbara
- P. Brown, Lecturer, Dept. of Biological Sciences, University of Manchester, UK
- B. Chaboyer, Associate Professor, Dept. of Physics & Astronomy, Dartmouth College
- J. Cho, Assistant Professor, Chungnam National University
- S. U. Choe, Professor, Seoul National University, Korea
- M. Choptuik, Professor, Dept. of Physics, University of British Columbia
- S. Colombi, chargé de recherche, l'Institut d'Astrophysique, Paris, France
- C. Contaldi, Lecturer, Imperial College
- H. Couchman, Professor, Dept. of Physics & Astronomy, McMaster University
- R. Crittenden, Reader, Institute of Cosmology and Gravitation, University of Portsmouth
- L. Dones, Senior Research Scientist, Southwest Research Institute
- J. Feige, Assistant Professor, University of Manitoba
- G. Felder, Assistant Professor, Dept. of Physics, Smith College
- H. Feldman, Associate Professor, Dept. of Physics & Astronomy, University of Kansas
- A. Frolov, Assistant Professor, Dept. of Physics, Simon Fraser University
- B. Gladman, Associate Professor, Dept. of Physics & Astronomy, UBC
- B. Hansen, Assistant Professor, UCLA
- H. Hoekstra, Assistant Professor, University of Victoria
- G. Holder, Assistant Professor, McGill University
- M. Holman, Astrophysicist, Planetary Sciences Division, Smithsonian Astrophysical Observatory
- A. Jaffe, Lecturer, Imperial College
- D. Johnstone, Assoc. Research Officer, Herzberg Institute of Astrophysics
- A. Klypin, Associate Professor, Dept. of Astronomy, New Mexico State University
- L. Kofman, Professor, University of Hawaii to CITA
- L. Knox, Associate Professor, Dept. of Physics, UC Davis
- K. Kuijken, Professor, Leiden University
- J. Lattanzio, Reader and Deputy Head, Dept. of Mathematics, Monash University, Australia
- B. Latter, Staff Scientist, IPAC, California Institute of Technology, USA
- A. Lazarian, Associate Professor, Dept. of Astronomy, University of Wisconsin at Madison
- H.-M. Lee, Professor, Pusan National University, Korea
- J. Levin, Assistant Professor, Barnard University
- Y. Levin, Assistant Professor, University of Leiden
- M. Liebendorfer, Assistant Professor, University of Basel
- P. Lilje, Professor, Institute of Theoretical Astrophysics, University of Oslo, Norway
- M. Lyutikov, Assistant Professor, Purdue University

- S. Majumdar, Assistant Professor, Tata Institute of Fundamental Research, Bombay, India
- R. Malaney, Senior Lecturer, School of Electrical Engineering and Telecommunications, University of New South Wales
- C. Matzner, Assistant Professor, Dept. of Astronomy, University of Toronto
- M. Medvedev, Assistant Professor, University of Kansas
- A. Meiksin, Reader, Dept. of Physics, University of Edinburgh, UK
- M. Merrifield, Professor, Dept. of Astronomy, University of Nottingham, UKD. Merritt, Professor, Dept. of Physics, Rochester Institute of Technology
- M. Miville-Deschenes, charge de recherche Iere classe au CNRS, Institut d'Astrophysique Spatiale
- I. Murakami, Staff Scientist, National Institute for Fusion Science, Nagoya, Japan
- J. Murray, Assistant Professor, University of Leicester
- S. Myers, Staff Scientist, NRAO
- P. Natarajan, Assistant Professor, Dept. of Astronomy, Yale University
- L. Nelson, Professor, Dept. of Physics, Bishop's University
- A. Noriega-Crespo, Staff Scientist, SIRTf Science Center, Caltech
- M. Peloso, Assistant Professor, University of Minnesota
- C. Pichon, Chargé de recherche, l'Observatoire de Strasbourg
- D. Pogosyan, Associate Professor, Dept. of Physics, University of Alberta
- S. Prunet, Staff Scientist, Institut d'Astrophysique de Paris
- T. R. Quinn, Research Assistant Professor, University of Washington, USA
- A. Raga, Professor, UNAM, Instituto de Astronomia, Mexico City, Mexico
- D. Richardson, Assistant Professor, Dept. of Astronomy, University of Maryland
- B. Ryden, Associate Professor, Dept. of Astronomy, Ohio State University
- P. Saha, Scientist, ETH, Zurich
- V. Sahni, faculty, Inter-University Centre for Astronomy and Astrophysics, Pune, India
- R. Scoccimarro, Assistant Professor, New York University
- N. Shaviv, Assistant Professor, Hebrew University
- T. Souradeep, faculty, Inter-University Centre for Astronomy and Astrophysics, Pune, India
- S. Sridhar, faculty, Inter-University Centre for Astronomy and Astrophysics, Pune, India
- G. Starkman, Associate Professor, Dept. of Physics, Case Western Reserve University
- A. Stebbins, Staff Scientist, NASA/Fermilab Astrophysics Center, USA
- J. F. Sygnet, chargé de recherche, Institut d'Astrophysique, Paris, France
- I. Szapudi, Assistant Professor, University of Hawaii
- S. Terebey, Professor, California State University in Los Angeles
- R. Thacker, Faculty, St. Mary's University
- P. Thomas, Professor, Astronomy Centre, University of Sussex, UK
- C. Thompson, Associate Professor, Dept. of Physics & Astronomy, University of North Carolina to CITA
- J. Touma, faculty, American University of Beirut
- D. van Buren, Project Manager, Jet Propulsion Laboratory, Caltech
- R. van de Weygaert, Lecturer, Kapteyn Astronomical Institut, University of Groningen, The Netherlands
- L. van Waerbeke, Assistant Professor, University of British Columbia
- J. Wadsley, Associate Professor, McMaster
- J. Wang, Assistant Professor, University of Maryland (d)
- R. Webster, Professor, School of Physics, University of Melbourne, Australia
- M. West, Professor, Dept. of Physics & Astronomy, University of Hawaii at Hilo
- L. Widrow, Associate Professor, Dept. of Physics, Queen's University
- G. Wilson, Scientist, SIRTf, Caltech
- Y. Wu, Assistant Professor, Dept. of Astronomy, University of Toronto
- J. Weingartner, Assistant Professor, Dept. of Physics & Astronomy, George Mason University
- G. Yepes, Professor Titular, Departamento de Fisica Teorica C-XI, Universidad Autonoma Madrid, Spain

CITA Current Snapshot...

CITA ALUMNI in FACULTY POSITIONS WITHIN CANADA

- **A. Babul**, Professor, Dept. of Physics and Astronomy, University of Victoria
- **S. Basu**, Assistant Professor, Dept. of Physics & Astronomy, University of Western Ontario
- **M. Choptuik**, Professor, Dept. of Physics, University of British Columbia
- **H. Couchman**, Professor, Dept. of Physics & Astronomy, McMaster University
- **J. Fiege**, Assistant Professor, University of Manitoba
- **A. Frolov**, Assistant Professor, Simon Fraser University
- **B. Gladman**, Associate Professor, Dept. of Physics & Astronomy, UBC
- **H. Hoekstra**, Assistant Professor, Dept. of Physics & Astronomy, University of Victoria
- **G. Holder**, Assistant Professor, Dept. of Physics, McGill University
- **D. Johnstone**, Associate Research Officer, NRC, HIA
- **L. Kofman**, Professor, CITA
- **C. Matzner**, Assistant Professor, Dept. of Astronomy, University of Toronto
- **L. Nelson**, Professor, Dept. of Physics, Bishop's University
- **D. Pogosyan**, Associate Professor, Dept. of Physics, University of Alberta
- **C. Thompson**, Professor, CITA
- **L. van Waerbeke**, Assistant Professor, Dept. of Physics & Astronomy, UBC
- **L. Widrow**, Associate Professor, Dept. of Physics, Queen's University
- **Y. Wu**, Assistant Professor, Dept. of Astronomy, University of Toronto

A number of **CITA National Fellows** have also gone on to faculty positions in Canada:

- **M. Hudson**, Professor, University of Waterloo;
- **R. Thacker**, Associate Professor and Canada Research Chair, St. Mary's
- **R. Ouyed**, Associate Professor, University of Calgary;
- **J. Wadsley**, Assistant Professor, McMaster University

Some CITA Graduate students as well; e.g. **M. Mandy**, Associate Professor, University of Northern British Columbia

CITA Current Snapshot...

CITA COUNCIL MEMBERS 2007-2008

Norman Murray Director

Meric Gertler Vice-Dean, FAS, UofT

****Dick Henriksen** Chair, Queen's University (2008)

Sharon Morsink Secretary, University of Alberta (2009)

***Julio Navarro** University of Victoria, CAS rep (2008)

Shantanu Basu University of Western Ontario (2010)

Arif Babul University of Victoria (2011)

***CAS rep - 2 year term 2006-2008**

****Term Expires – one new member for 2008-2009**

3. National Programs

A. CITA NATIONAL FELLOWS

National Fellows are nominated by the host university and selected by CITA Council using the same quality criteria as for the CITA research fellows, along with strategic national considerations. Since the start of the program in 1988, we have named **47** National Fellows.

CITA provides 50% of the stipend up to 52K/2 years, plus up to 4K research expenses. The remainder is provided by the host university. National Fellows are encouraged to visit CITA for extended periods of time.

CITA put ads in the AAS Job Register, highlighting the National Fellow Program and web links.

CITA also advertised National Fellow positions from CITA's Web site, coupling NF visibility to CITA RA opportunities.

CITA helps in recruitment.

National Fellows for 2008-2009:

- **CAMERON, Chris** Saint Mary's University (2008-2010) Nominated by David Guenther. Research area:
- **DOTTER, Aaron** University of Victoria (2008-2010). Nominated by Don A. VandenBerg. Research area:
- **POPE, Edward** University of Victoria (2008-2010). Nominated by Arif Babul. Research area:
- **DOBBS-DIXON, Ian** McGill University (2007-2009) Nominated by Andrew Cumming. Research interests: numerical simulations, planets
- **STINSON, Greg** McMaster University (2007-2009) Nominated by Hugh Couchman. Research interests: star formation

National Fellows for 2007-2008:

- **DOBBS-DIXON, Ian** McGill University (2007-2009) Nominated by Andrew Cumming. Research interests: numerical simulations, planets
- **STINSON, Greg** McMaster University (2007-2009) Nominated by Hugh Couchman. Research interests: star formation
- **CAI, Kai** McMaster University (2006-2008) Nominated by R. Pudritz. Research interests: Protostellar Jets
- **CUK, Matija** University of British Columbia (2006-2008) Nominated by B. Gladman. Research interests: Planetary Dynamics and Planet formation

National Programs...

B. SENIOR VISITING FELLOWS

CITA supports salaries of faculty members from other Canadian universities to make extended visits to CITA Recent awards:

2007-08	Ralph Pudritz (McMaster Unveristy)
2005-06	Rachid Ouyed (University of Calgary) Norbert Bartel (York University)
2004-05	Lorne Nelson (Bishop's University)
2003-04	Hugh Couchman (McMaster University)
2002-03	Mike Hudson (University of Waterloo) Arif Babul (University of Victoria)
2000-01	Norbert Bartel (York University)
1999-00	Werner Israel (University of Victoria) Sun Kwok (University of Calgary) Marshall McCall (York University) Douglas Scott (UBC) Larry Widrow (Queen's University)
1998-99	Kim Innanen (York University) Lorne Nelson (Bishop's University)
1995-97	Hugh Couchman (Western Ontario) Dick Henriksen (Queen's University) Michael West (Saint Mary's University) Larry Widrow (Queen's University) Ralph Pudritz (McMaster University) Paul Wesson (Waterloo)

We are interested in new Senior Visiting Fellows:

Typically the fellowships provide funding to release the fellow from teaching and administrative duties for one academic term, or for sabbatical top-up. The Fellow is expected to spend a minimum of 50% of the supported time in residence at CITA. The CITA Senior Visiting Fellows Program began with start-up funds from the UofT Astronomy Department and has thrice received injections of funding from the UofT School of Graduate Studies.

National Programs...

FUTURE SABBATICAL VISITORS:

- Professor **Eric Poisson**, Guelph University, 10 months

RECENT SABBATICAL VISITORS:

- Professor **Gary Felder**, Smith College, visited for 5 months
- Professor **Francis Bernardeau** Centre D'\etudes De Saclay, Service de Physique Theorique, France, visited for 6 months
- Professor **Ralph Pudritz**, McMaster, visited for 4 months
- Professor **Richard Ellis** from Caltech visited for 2 months
- Dr. **Steve Myers** from NRAO visited for 3 months
- Professor **Andreas Reisenegger** from the Universidad Catholica in Santiago Chile, summer 2006
- Professor **Joao Magueijo** from Imperial visiting for a year (mostly Perimeter Institute)

PREVIOUS SABBATICAL VISITORS:

- Professor **Sergei Shandarin** from University of Kansas visited for 6 months
- Professor **Rien van de Weygaert** from University of Groningen visited for one month
- Professor **Peter Coles** from University of Nottingham visited for 3 months
- Professor **Norbert Bartel** from York University visited for 4 months
- Professor **Rachid Ouyed** from Univ. of Calgary visited for 4 months
- Professor **Dong Lai** from Cornell visited for a term
- Professor **Lorne Nelson** from Bishop's University visited for a term
- Professor **Ewan Stewart** from KAIST Korea visited for 6 months
- Professor **Arif Babul** from University of Victoria visited for 4 months.
- Professor **Mike Hudson** from University of Waterloo was visiting for 4 months.
- Professor **Margot Mandy** from the University of Northern British Columbia was a CITA visitor for 2 months.
- Professor **Omer Blaes** from UC Santa Barbara visited for 3 months.
- Professor **Tongjie Zhang** from Beijing Normal University was visited for a year.

National Programs...

CITA LONG TERM VISITORS: 16 from May 2007- April 2008

<i>Seoul National University</i>	Hun Lee	<i>CITA Visitor</i>
<i>Columbia University</i>	Andrei Beloborodov	<i>CITA Visitor</i>
<i>Simon Fraser University</i>	Andrei Frolov	<i>CITA Visitor</i>
<i>Beijing Normal University</i>	Tong Jie Zhang	<i>CITA Visitor</i>
<i>IAP, Paris</i>	Jean-Michel Desert	<i>CITA Visitor</i>
<i>Tata Institute for Fundamental Research</i>	Subha Majumdar	<i>CITA Visitor</i>
<i>Caltech</i>	Arnold Boothroyd	<i>CITA Visitor</i>
<i>University of Waterloo</i>	Mich Fich	<i>CITA Visitor</i>
<i>University of Waterloo</i>	James Taylor	<i>CITA Visitor</i>
	Ethan Vishniac	<i>CITA Visitor</i>
<i>McMaster University</i>	Ralph Pudritz	<i>Sabbatical Visitor</i>
<i>Centre d'etudes de Saclay</i>	Francis Bernardeau	<i>Sabbatical Visitor</i>
<i>Smith College</i>	Gary Felder	<i>Sabbatical Visitor</i>
<i>McMaster University</i>	David Kirsh	<i>CITA Visitor, Grad Student</i>
<i>McMaster University</i>	Philippe Boisvert	<i>CITA Visitor, Grad Student</i>
<i>McMaster University</i>	Yasuhiro Hasegawa	<i>CITA Visitor, Grad Student</i>

CITA SHORT TERM VISITOR PROGRAM: 166 from May 2007- April 2008

CITA has a vigorous visitors program that brings a number of Astronomy and Physics faculty members from other Canadian Universities and from abroad for both extended stays and shorter visits.

National Programs...

C. PREDOCTORAL PROGRAM:

Bringing students in their PhD programs to CITA for periods of a few months to a year has proven to be a great success. All candidates have come with their own funding. Participants in the program so far are:

- **Daniel Figuero** – Spain, August – December 2007
- **Marie Martig** - Ecole Centrale de Paris, 2006
- **Jean Coupon** – Observatoire de Paris, 2006
- **Jan Kratochvil** – Stanford, 2005-2006
- **Amir Hajian** – IUCAA, India, 2005
- **Doug Hanley** – Caltech, 2004
- **Wan-II Park** – KAIST, Korea, 2004
- **Parker Troischt** – University of North Carolina, 2004
- **Francois Fressin** – Institut d'Astrophysique Spatiale, Paris, 2003
- **Stelios Kazantzidis** – Institute for Theoretical Physics, Zurich, 2003
- **Jie Wang** – Beijing Observatory. 2003
- **Shingkwong Wong** – National Taiwan University, 2003
- **Sebastien Ray** – École Normale Supérieure, 2002
- **Yacine Dolivet** – École Normale Supérieure, 2001
- **Kenji Kadota** – University of California, Berkeley, 2001
- **Tom Montroy** – University of California, Santa Barbara, 2001-2001
- **Aristotle Socrates** – University of California, Santa Barbara, 2001
- **Amanda Karakas** – Monash University, 2000
- **Juhan Kim** – Seoul National University, 2000-2001
- **Johannes Martin** – University of Jena, Germany, 2000
- **Sebastian Pichler** – Ludwig, Maximilians Universitaet, Germany, 2000-2001
- **Gary Felder** – Stanford, 1999-2000 (now a CITA PDF)
- **Céline Anthoine** – École Normale Supérieure, 1999
- **Colin Borys** – University of British Columbia, 1999

National Programs...

D. GRADUATE STUDENTS 2006-2007: 17

- **SLOAN, Peter** (Physics). Supervised by L. Kofman
- **CROLL, Bryce** (Astronomy). Supervised by N. Murray
- **BRADEN, Jonathan** (Physics). Supervised by L. Kofman
- **HARPER-CLARK, Elizabeth** (Astronomy). Supervised by N. Murray
- **HARONNOIS, Joachim** (Physics). Supervised by U.-L. Pen
- **BATTAGLIA, Nicholas** (Astronomy). Supervised by R. Bond
- **FERNANDEZ, Rodrigo** (Astronomy). Supervised by C. Thompson
- **GONCLAVES, Daniela** (Astronomy). Supervised by P.G. Martin
- **HUANG, Zhiqi** (Astronomy). Supervised by R. Bond and L. Kofman
- **LU, Ting Ting** (Astronomy). Supervised by U.-L. Pen
- **PANG, Bijia** (Astronomy). Supervised by U.-L. Pen
- **PRODAN, Snezana** (Physics). Supervised by N. Murray
- **FARHANG, Marieh** (Astronomy). Supervised by R. Bond and B. Netterfield
- **RIVEST, Guillaum** (Astronomy). Supervised by P. Martin
- **ROY, Arabindo** (Astronomy). Supervised by P. Martin
- **MUDRYK, Lawrence** (Astronomy). Supervised by N. Murray
- **VAUDREVANGE, Pascal** (Physics). Supervised by L. Kofman

E. SUMMER UNDERGRADUATES 2008:

This summer there are **6** summer students working with faculty in collaboration with many of the postdoctoral fellows. **5** have won NSERC Summer undergraduate awards.

NSERC:

- **LLOYD, Emma** (Ottawa) working on "Origin of the highest-energy cosmic rays" with C. Pfrommer/D. Bond
- **ZHU, Ting** (UofT) working on "Joint X-Ray, Weak Lensing and Sunyaev-Zeldovic Analysis of Large Sample of Clusters" with J. Sievers/D. Bond
- **ROBINSON, Patrick** (UofT) working on "Nonlocal Dynamics in String Theory and Cosmology " with N. Barnaby/L. Kofman
- **PALANIAPPAN, Rohan** (UofT) working on "Helicity Conservation and Magnetic Relaxation" with A. Broderick/N. Murray
- **INGLE, Ashleigh** (UofT) working on "Smashing two Stars: weird Giants?" with N. Ivanova and N. Murray

NON-NSERC:

- **ODEGOVA, Julia** (UofT) working "The GMRT EoR data analysis pipeline" with U-L Pen

National Programs...

F. COMPUTATIONAL UNDERGRADUATE STUDENTS:

Summer 2008

Anthony Paulozza, Assistant to the Systems Manager, co-op student

Winter 2008

Alex Hughson, Assistant to the Systems Manager, co-op student

Fall 2007

Radu Nitu, Assistant to the Systems Manager, co-op student

Summer 2007

Radu Nitu, Assistant to the Systems Manager, co-op student

Winter 2007

Jacob de Bruyn, Assistant to the Systems Manager, co-op student

Fall 2006

Alex Zenkov, Assistant to the Systems Manager, co-op student

Summer 2006

Paul Millerd, Assistant to the Systems Manager, co-op student

Winter 2006

Alex Zenkov, Assistant to the Systems Manager, co-op student

Fall 2005

Jason Chong, Assistant to the Systems Manager, co-op student

Summer

2005 **Peter Wagner**, Assistant to the Systems Manager, co-op student

Winter 2005

Jason Chong, Assistant to the Systems Manager, co-op student

Fall 2004

Peter Wagner, Assistant to the Systems Manager, co-op student

Summer 2004

Philip Petracca, Assistant to the Systems Manager, co-op student

Mubdi Rahman, Summer student web assistant, windows

Spring 2004

Steven Di Rocco, Assistant to the Systems Manager, co-op student

Winter 2003

Steven D'Cruz, Assistant to the Systems Manager, co-op student

Summer 2003

Steven Di Rocco, Assistant to the Systems Manager, co-op student

Winter/Spring 2003

David Wu, Assistant to the Systems Manager, co-op student

Summer 2002

Don Banh, Assistant to the Systems Manager

Winter/Spring 2002

Filip Lazar, Assistant to the Systems Manager, co-op student

Summer 2001

Nishant Faria, Assistant to the Systems Manager

Don Banh, Assistant to the Systems Manager, continued 2001-02 academic year on a reduced basis

4. CITA ACTIVITY

A. CITA EXCHANGE PROGRAM:

CITA postdoctoral fellows travel to sister institutions to work with leading scientists in the US, Germany and Taiwan. From April 2007 to May 2008, **4** CITA Fellows went to KITP; **3** to MPA; **1** to ASIAA.

CITA and the Kavli Institute for Theoretical Physics at Santa Barbara:

To KITP

- **Jonathan Braithwaite**, CITA, January – February 2008
- **Samaya Nissanke**, CITA, January 2008
- **Katharina Jappsen**, CITA, September 2007
- **Jonathan Dursi**, CITA, May 2007
- **Natasha Ivanova**, CITA, January-February 2006
- **Ilian Iliev**, CITA, January-February 2005
- **Edward Thommes**, CITA, February-March 2004
- **David Ballantyne**, CITA, June 2003
- **Joseph Weingartner**, CITA, May 2002
- **Andrei Beloborodov**, CITA, March 2002
- **Mikhail Medvedev**, CITA, April 2002
- **Phil Arras**, CITA, April-May 2001
- **Yanqin Wu**, CITA, April-May 2001

CITA and Max Planck Institute for Astrophysics:

To MPA

- **Huirong Yan**, CITA, Winter 2008
- **J. Sievers**, CITA, Winter 2008
- **Brice Menard**, CITA, Fall 2007
- **Christoph Pfrommer**, CITA, Fall 2007
- **Jonathan Dursi**, CITA, Fall 2006
- **Natasha Ivanova**, CITA, Winter 2006

CITA and the Academia Sinica Institute of Astronomy and Astrophysics

To MPA

- **Huirong Yan**, CITA, Spring 2008

CITA ACTIVITY...

B. SACKLER VISITING ASTROPHYSICIST

Each year CITA invites an internationally distinguished scholar conducting research in theoretical astrophysics to give two lectures (one public) at the University of Toronto, and to interact with the CITA faculty, research fellows and graduate students, as well as researchers and students in the Departments of Astronomy and Physics. This is funded by an endowment, the Raymond and Beverly Sackler Visiting Astrophysicist Program. The visit is intended to be the highlight of the academic year at CITA.

- **Sir Martin Rees (Lord Martin)**, Cambridge, 1997-98
- **Peter Goldreich**, Caltech, 1998-99
- **Frank Shu**, Berkeley, 1999-00
- **Jim Peebles**, Princeton, 2000-01
- **John Bahcall**, Princeton, 2001-02
- **Andrei Linde**, Stanford, 2002-03
- **George Efstathiou**, Cambridge, 2003-04
- **Chris McKee**, UC Berkeley, 2004-05
- **Rashid Sunyaev**, Max-Planck, 2005-2006
- **Scott Tremaine**, IAS Princeton, 2006-2007
- **Kip Thorne**, Caltech, 2007-2008

CITA ACTIVITY...

C. SUPPORT FOR SCIENTIFIC MEETINGS IN 2007-2008

As part of CITA's national mandate, the aim of this program is to promote interaction, collaboration and exchange of scientific results within the Canadian and international astrophysics communities.

CITA supported or organized **8** workshops between April and December 2007. There are currently plans to support at least **7** in 2008.

- **40 Years of Pulsars, August 2007, McGill**
- **Theory Canada 3, June 2007, University of Alberta**
- **Probing the Origins of the Cosmos, May 2007, McMaster**
- **Multiplicity in Star Formation, May 16-18, 2007, University of Toronto**
- **Black Holes VI Workshop, May 12-16, 2007, University of New Brunswick**
- **12th Canadian Conference on General Relativistic Astrophysics, May 17-20, University of New Brunswick**
- **Summer School on Interstellar Medium, August 26-30 2007, Naramata, BC.**
- **Gravitational Waves and Numerical Relativity, August 28- September 1, 2007**
- **PACOS 08 Meeting, June 1-6, 2008, Perimeter**
- **Workshop on Parallel Computing, July 21-25, 2008**
- **24th TEXAS Symposium, December 7-14, 2008, UBC SFU**
- **Astronomical Polarimetry 2008, July 6-11, 2008, UdeMontreal**
- **Canadian Astro Ski 2008, February 19-22, 2008 UBC**
- **17th Kingston Meeting, May 25-28, 2008, Banff, Alberta**
- **Upcoming Lensing Surveys: beyond the obvious, June 2008, CITA**

CITA ACTIVITY...

D. AWARDS:

THE BEATRICE D. TREMAINE FELLOWSHIP

This is an endowed award to be given annually on the basis of outstanding research to a current CITA research fellow.

- 2007: [Natasha Ivanova](#)
- 2006: [Michael Nolta](#)
- 2005: [Jonathan Sievers](#)
- 2004: [Carlo Contaldi](#)
- 2003: [Yuri Levin](#)
- 2002: [Andrei Beloborodov](#)
- 2001: [Henk Hoekstra](#)
- 2000: [Nir Shaviv](#)
- 1999: [Dmitri Pogosyan](#)

THE JEFFREY L. BISHOP FELLOWSHIP

Jeffrey Bishop was one of the first group of postdocs at CITA. He died tragically in an accident shortly after leaving CITA. In his memory his mother gives a donation biennially.

- 2007: [Yoram Lithwick](#)
- 2005: [Jonathan Dursi](#)
- 2003: [Matthias Liebendorfer](#)
- 2001: [Yanqin Wu](#)
- 1999: [Phil Arras](#)
- 1997: [John Dubinski](#)
- 1995: [Kevin Rauch](#)
- 1993: [Janna Levin](#)
- 1991: [Gerry Quinlan](#)
- 1990: [Konrad Kuijken](#)

CITA ACTIVITY...

E. SCIENTIFIC CONTRIBUTIONS:

Researchers at CITA published nearly 100 in 2007

F. CITA WEBSITE:

www.cita.utoronto.ca lists all upcoming events, CITA's latest news, information on current research initiatives, jobs, and visitor information. The website also provides archives on all talks, seminars, meetings, workshops and special lectures.

G. CITA WEB CASTING

CITA is providing web casts of all our seminars, lectures and talks. Archives of web casts; audio, video, and slides are recorded and are accessible at the CITA seminar page: www.cita.utoronto.ca/index.php.eac

H. SUPPORT FOR VISITS BY CITA FELLOWS

The aim of this program is to promote professional interactions within the Canadian theoretical astrophysics community, by helping to defray the travel costs of CITA staff who are invited to visit Canadian universities outside Toronto. Please contact the CITA Business Officer if you are interested.

I. COLLOQUIA and SEMINARS

Both the CITA professors and postdoctoral fellows give numerous colloquia and seminars at institutions across North America and around the world, as well as presentations at scientific meetings. The total number for 2007-2008 exceeds **120**. CITA hosted **80** seminars from April 2007 to May 2008.

J. WEEKLY Astro-ph MEETINGS:

Communication in astronomy is enhanced by the Astro-ph pre-print server, which posts about 30 papers per day, submitted by astronomers from around the world. A selection of these papers (selections made primarily by CITA PDFs or grad students) are discussed for an hour over lunch on Mondays, Wednesdays, and Fridays. Since CITA PDFs cover every field in astronomy, this sharing of expertise enhances learning for everybody at CITA.

5. New Membership Applications and Renewals

NEW MEMBERSHIP APPLICATIONS:

- Dmitri Pogosyan (University of Alberta)

RENEWAL APPLICATIONS:

- Mike Fich (Waterloo)
- Lev Kofman (CITA)
- Ue-li Pen (CITA)
- Ralph Pudritz (McMaster)
- Douglas Scott (UBC)

Membership of CITA Inc

Murray Alexander (NRC) 2010
Arif Babul (Victoria) 2010
Shantanu Basu (Western) 2010
Pierre Bastien (Montéal) 2009
Richard Bond (CITA) 2011
Ray Carlberg (Toronto) 2011
Brian Chaboyer (Dartmouth) 2009
David Clarke (St. Mary's) 2009
Alan Coley (Dalhousie) 2010
Hugh Couchman (McMaster) 2010
Andrew Cumming (McGill) 2012
Robert Deupree (St. Mary's) 2009
Martin Duncan (Queen's) 2010
John Dubinski (Toronto) 2011
Charles Dyer (Toronto) 2011
Mike Fich (Waterloo) 2013
Jason D. Fiege (Manitoba) 2013
Andrei Frolov (SFU) 2012
David Guenther (St. Mary's) 2012
Joseph Hahn (St. Mary's) 2009
Mark Halpern (UBC) 2011
David Hartwick (Victoria) 2010
Richard Henriksen (Queen's) 2010
Jeremy Heyl (UBC) 2009
Henk Hoekstra (Victoria) 2010
Michael Hudson (Waterloo) 2011
Kim Innanen (York) 2011
Werner Israel (Victoria) 2010
Doug Johnstone (HIA NRC at Victoria) 2010
Lev Kofman (CITA) 2008
Sun Kwok (Calgary) 2010
Kayall Lake (Queen's) 2011
Denis Leahy (Calgary) 2011
Margo Mandy (UNBC) 2010

Michael Marlborough (Western) 2010
Hugo Martel (Laval) 2010
Peter Martin (CITA) 2010
Christopher Matzner (Toronto) 2012
George Mitchell (St. Mary's) 2010
Sharon Morsink, (Alberta) 2011
Norman Murray (CITA) 2009
Julio Navarro (Victoria) 2009
Lorne Nelson (Bishop's) 2011
Rachid Ouyed (Calgary) 2010
Ue-Li Pen (CITA) 2013
Serge Pineault (Laval) 2011
Eric Poisson (Guelph) 2011
Levon Pogosian (SFU) 2012
Dmitri Pogosyan (Alberta) 2013
Ralph Pudritz (McMaster) 2013
Douglas Scott (UBC) 2013
Ian Short (St. Mary's) 2009
Alison Sills (McMaster) 2013
Glenn Starkman (Case Western) 2010
Peter Sutherland (McMaster) 2011
James Taylor (Waterloo) 2013
Robert Thacker (Queen's) 2012
Chris Thompson (CITA) 2011
Scott Tremaine (Princeton) 2010
Don VandenBerg (Victoria) 2010
Ethan Vishniac (McMaster) 2013
Ludo van Waerbeke (UBC) 2010
James Wadsley (McMaster) 2013
Francois Wesemael (Montréal) 2012
Michael West (Hilo) 2010
Paul Wesson (Waterloo) 2009
Paul Wiegert (Western) 2010
Larry Widrow (Queen's) 2010
Yanqin Wu (Toronto) 2012

CITA on the WWW

CITA CAN BE FOUND AT:

<http://www.cita.utoronto.ca>

There you will find all the usual document information about CITA, a list of current personnel, Annula Reports, CITA guidelines, CITA Visitor and Seminar lists, etc.

Pillars of Support

CITA, Inc. & NSERC

NSERC support: Special Program to Collaborative Special Program to Institute Grant (as with the 3 Math Institutes, Fields, CRM, PIMS) tied in with 4 year NSERC Reallocation (1999-2003, 2003-07)

New structure for Institute Grants under MRS, Major Research Support (2008-2012).

CITA, Arts & Science@UofT

- **Institute in the School of Graduate Studies (extremely positive 5 year reviews in 1996, May 2001)**
- **Institute in the Faculty of Arts & Science, July 2005 (extremely positive reviews Fall 2006)**

CIAR Cosmology and Gravity Program

Critical node of the CIAR Cosmology and Gravity Program (3 Fellows - including Program Director until July 1, 2012)

Other:

NSERC Operating Grants for Faculty, CFI for computing, External Fellowships for PDFs, NSERC/CFI/CSA collaborative grants and other targets of opportunity