

**Yuri Levin: CURRICULUM VITAE (October 2004)**

OFFICE:	HOME:
CITA,	36 Hillview Ave
University of Toronto,	Toronto, ON M6P1J5
60 St. George Street,	Canada
Toronto, ON M5S3H8,	416-7663867
Canada	
416-9781777	
yuri@cita.utoronto.ca	

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**Personal**

Born: 10/25/71, Ukraine. Citizenship: Australian. Married with two children.

**Work experience:**

Sept. 2002— present	Canadian Institute for Theoretical Astrophysics, Senior Research Associate.
Sept. 1999— Sept. 2002	Theoretical Astrophysics Center at UC Berkeley, Postdoctoral Fellow.

**Education**

Sept. 1993— May 1999	California Institute of Technology, Ph.D. in theoretical physics. Thesis: “Topics in the Physics and Astrophysics of LIGO”. Advisor: Kip S. Thorne
Jan. 1992— Dec. 1992	University of Melbourne, B.Sc. (Honours), Physics Major. Thesis: “Higgs Physics in Quark-Lepton Symmetric Models”. Advisor: Raymond R. Volkas
Feb. 1990— Nov. 1991	Monash University, Undergraduate Student, Physics Major
Sept. 1988— March 1989	Moscow Institute of Physics and Technology, Undergraduate Student, Electrical Engineering Major

**Research interests:** Theoretical Astrophysics, Physics of LIGO.

**Awards**

Oct. 2003	Beatrice D. Tremaine fellowship for excellence in research at CITA
Oct. 1997	John Stemple Memorial Award “For outstanding research as displayed during the oral candidacy exam” [Caltech]
Dec. 1992	Laby Medal “For the best Honours thesis of the year in Victoria [Australia]” (shared with Miles Smith)

## Talks

- March 1995 Pacific Coast Gravity Meeting, “Speed meter as a Quantum Nondemolition measuring device for force”
- Sept. 1996 Moscow University seminar, “QND for Braginsky-Khalili nonlinear readout meter”
- Dec. 1996 Melbourne University Optics seminar, “Towards Quantum Nondemolition measurement for LIGO”
- May 1997 Caltech LIGO science seminar, “Internal thermal noise for LIGO test masses: a direct approach”
- Nov. 1997 Stanford workshop on thermal noise, “Internal thermal noise for LIGO test masses: a direct approach”
- Apr. 1998 Ginsburg seminar, FIAN, Moscow: “New ideas for control of suspension thermal noise for LIGO ”
- Aug. 1998 LIGO Science Collaboration meeting at Boulder, “How to beat suspension thermal noise”
- Sept. 1998 Albert Einstein Institute seminar, Potsdam: “Suspension thermal noise for LIGO: a theorist’s perspective”
- Jan. 1998— Seminars at Fermilab, MIT, IAS, Cornell, UC Berkeley, University of Chicago,  
present CITA, Marcel Grossman meeting, UC Santa Barbara, Milwaukee, McGill, Melbourne, Utrecht, Amsterdam.

## Teaching experience at Caltech

- 1993/94/95 TA for the freshman Physics Lab course
- 1995/96 Grader for “Quantum Field Theory” graduate course (textbook: Ryder)
- 1996 Grader for “Applications of Classical Physics” graduate course (textbook: Blandford/Thorne)
- 1997 Grader for “Statistical Mechanics” graduate course (textbook: Pathria)

## Publication List

1. Yuri Levin and Raymond R. Volkas 1993, "Study of the simplest realistic Higgs sector in quark-lepton symmetric models", *Physical Review D*, **48**, 5342
2. Farid Ya. Khalili and Yuri Levin 1996, "Speed Meter as a quantum nondemolition measuring device for force", *Physical Review D*, **54**, 4735
3. Yuri Levin 1998, "Internal thermal noise for LIGO test masses: a direct approach", *Physical Review D*, **57**, 659
4. Yuri Levin 1998, "QND and higher order effects for a nonlinear meter in an interferometric gravitational wave antenna", *Physical Review D*, **57**, 2069
5. Vladimir B. Braginsky, Yuri Levin and Sergey P. Vyatchanin 1998, "How to reduce the suspension thermal noise in LIGO without improving the  $Q$ 's of the pendulum and violin modes", *Measurement Science and Technology*, **10**, 598.
6. Yuri Levin 1999, "Runaway Heating By R-modes of Neutron Stars in Low Mass X-ray Binaries", *Astrophysical Journal*, **517**, 328
7. Yuri Levin and Greg Ushomirsky 2001, "Nonlinear r-modes in a spherical shell: issues of principle", *MNRAS*, **322**, 515
8. Yuri Levin and Greg Ushomirsky 2001, "Crust-core coupling and r-mode damping in neutron stars", *MNRAS*, **324**, 917
9. H. J. Kimble, et. al. 2002, "Conversion of conventional interferometers into QND interferometers by modifying their input and/or output optics", *Physical Review D*, 65b2002K.
10. Deborah H. Santamore and Yuri Levin 2001, "Eliminating thermal violin spikes from LIGO noise", *Physical Review D*, **64**, 042002.
11. Anatoly Spitkovsky, Yuri Levin, and Greg Ushomirsky 2002, "The propagation of thermonuclear flames on rapidly rotating neutron stars: extreme weather during type-I x-ray bursts", *Astrophysical Journal*, **566**, 1018S.
12. Yuri Levin and Andrei Beloborodov 2003, "Stellar Disk in the Galactic Center: A Remnant of a Dense Accretion Disk?", *Astrophysical Journal*, **590**, 33L
13. Yuri Levin 2003, "Formation of massive stars and black holes in self-gravitating AGN discs, and gravitational waves in LISA band", astro-ph/0307084.
14. Andrei M. Beloborodov and Yuri Levin 2004, "Orbital roulette: a new way of gravity estimation from observed motions", *Astrophysical Journal*, **613**, 224.
15. Yuri Levin and Caroline D'Angelo 2004, "Hydromagnetic and Gravitomagnetic crust-core coupling in a precessing neutron star", *Astrophysical Journal*, **613**, 1157.

16. Christopher D. Matzner and Yuri Levin 2004, “ Low-Mass Star Formation: Initial Conditions, Disk Instabilities, and the Brown Dwarf Desert”, submitted to ApJ, astro-ph/0408525.

**Unpublished papers:**

1. Nir J. Shaviv and Yuri Levin, “Magnetic fields and Globular-Cluster sized objects from radiatively driven nonlinear structure at recombination”, see <http://www.cita.utoronto.ca/~shaviv/preprints/articles.html>.

**Hobbies**

Argentine Tango & travel