László Árpád GERGELY

ASSOCIATE PROFESSOR, UNIVERSITY OF SZEGED

Department of Theoretical Physics
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POSITIONS

2009 – present	*Associate professor* – University of Szeged, HUNGARY
2011	*Visiting researcher* – University of Hong Kong, HONG KONG
2009	*Fellow* – Institute for Advanced Study, Collegium Budapest, HUNGARY
2007 – 2008	*Senior lecturer, IoP* – South Bank University, London, UK
2003, 2004	*Visiting researcher, Eötvös fellow* – Inst. of Cosmology & Gravitation, University of Portsmouth, UK
2000 – 2008	*Senior research associate, Magyary, Széchenyi, Bolyai fellow* – University of Szeged, HUNGARY
2000	*Professeur invité* – Université Louis Pasteur, Strasbourg, FRANCE
1998 – 1999	*Visiting researcher, Eötvös, Soros fellow* – Université Louis Pasteur, Strasbourg, FRANCE
1996 – 1998	*Senior research associate, OTKA fellow* – KFKI Research Institute Budapest, HUNGARY
1995	*Visiting researcher, OTKA fellow* – University of Utah, Salt Lake City, USA
1993 – 1994	*Lecturer* – JATE University, Szeged, HUNGARY
1990 – 1993	*TMB fellow of the Hungarian Academy of Sciences* – KFKI Research Institute Budapest, HUNGARY
1988 – 1990	*Research physicist* – IMPF Odorheiu-Secuiesc, ROMANIA

LANGUAGES

Hungarian (native), English & Romanian (fluent), French (medium), German, Italian (basic understanding)

EDUCATION, QUALIFICATIONS

2011	Dissertation submitted for the title "Doctor of the Hungarian Academy of Sciences" Title: *Gravitationally radiating compact binaries and research in brane worlds*
2008	Habilitation in Physics – University of Szeged, Hungary (with maximal points) Research Talk: *Post-Newtonian dynamics of compact binaries and their gravitational radiation* Public Lecture: *Black holes*
1996	PhD (CSci) in Physics, Hungarian Academy of Sciences (with maximal points) Dissertation: *Vacuum-vacuum Kerr-Schild maps*. Supervisor: Zoltán Perjés
1988	Masters in Physics, University of Bucharest, Romania (10 points out of 10) Thesis: *Local inertial systems in general relativity*. Supervisor: Mihai Vişinescu
1987	BSc in Physics, University of Bucharest, Romania (9.97 points out of 10, top 2% of the class) Thesis: *Space-time and gauge symmetries in the fundamental interactions*. Supervisor: Mihai Vişinescu
1982	Baccalaureate, Áprily Lajos Főgimnázium, Brassó, Romania, Mathematics & Physics class (10 points out of 10)

MEMBERSHIPS

Management Committee member, **Black Holes in a Violent Universe**, EU COST Collaboration
Council member, **VIRGO-ESO Scientific Forum** (VESF)
Scientific Committee member of the **Particle Physics Section** of the Hungarian Academy of Sciences
International Society on **General Relativity and Gravitation**
LIGO Scientific Collaboration (LSC)
Einstein Telescope Collaboration

SCIENTIFIC RECORD

Total number of scientific publications: **120** (*in refereed journals*: **68**) *Talks given*: **95**
Total impact factor: **276.663** (*per author*: **132.106**) *Independent citations*: **650** **h=14**

HONORS

2009	***Bolyai Medal*** of the Hungarian Academy of Sciences
2006	*Honorable Mention* in the Gravity Research Foundation's Essays in Gravitation Competition Essay title: *"Dark energy from gravitational collapse?"*
2005 – 2008	*János Bolyai Fellowship* of the Hungarian Academy of Sciences
2002 – 2005	*István Széchenyi Fellowship* of the Hungarian Ministry of Education
2000 – 2002	*Zoltán Magyary Fellowship* of the Hungarian Ministry of Education
1998, 1999, 2003	*Roland Eötvös Fellowship* of the Hungarian Ministry of Education
1998	*Géza Györgyi Award* of the KFKI Research Institute for Particle and Nuclear Physics

RESEARCH GRANTS AS PRINCIPAL INVESTIGATOR

2012	*Periodic jet structures by merging supermassive spinning black holes* (COST, EU; *individual award*)
2010	*Gravitational wave background from supermassive black hole mergers* (COST, EU; *individual award*)
2008	*Research in gravitation* (LSBU Research Opportunities Fund, UK; *individual award*)
2005 – 2013	*ERASMUS* (with Universities of Bonn, Portsmouth, Naples, Umeå, Montpellier, Braşov; Hungarian PI)
2007 – 2010	*Gravitation and astro-particle physics* (OTKA Graduate School grant; PI)
2004 – 2007	*Brane-cosmologies and gravitational radiation phenomena* (OTKA research grant; PI)
2003 – 2006	*Gravitational waves and radiation phenomena in general relativity* (OTKA Graduate School grant; PI)
2003	*Mecenatúra Travel Grant* (Hungarian Ministry of Education; *individual award*)
1996 – 1998	*Research in general relativity* (OTKA postdoctoral fellowship and grant; *individual award*)
1995, 2003	*OTKA Travel Grants* (*individual awards*)
1994, 1998	*Soros Foundation Travel Grant* (*individual awards*)
1993 – 1994	*Pre-doctoral fellowship* of the Foundation for Hungarian Science, Hungarian Loan Bank

SCIENTIFIC SERVICE

referee	Physical Review Letters	Journal of Cosmology and Astroparticle Physics (JCAP)
	Physical Review D	Monthly Notices of the Royal Astronomical Society
	Physics Letters B	International Journal of Modern Physics A
	Classical and Quantum Gravity	International Journal of Modern Physics D
	European Physical Journal - Plus	Astrophysics and Space Science
	European Physical Journal C	
reviewer	Italian Ministry for Education, University and Research (MIUR) Czech Science Foundation National Council for Scientific Research of the Romanian Government Romanian National Council for Research and Development Hungarian Scientific Research Fund (OTKA) Hungarian Scientific Student Conference (Western Hungarian University, Szombathely, Hungary 2009)	
advisory board member	Pomeranian Workshop in Fundamental Cosmology (University of Szczecin, Pobierowo, Poland 2005) Bolyai-Gauss-Lobachevsky Conference on Hyperbolic Geometry (Babes-Bolyai University, Cluj, Romania 2010) *[http://bgl.math.ubbcluj.ro/mainp.php?pg=scicom]*	

SCIENCE MONITORING AT LIGO (LASER INTERFEROMETER GRAVITATIONAL WAVE OBSERVATORY)

Nov.1-10.2009 Livingston site

EXAMINER FOR PHD DEGREE / REFEREE FOR PHD THESIS / FOR ACADEMIC DOCTORATE THESIS

2011 **István Rácz** (Hungarian Academy of Sciences, DrMTA): *Black holes in the geometrized theories of gravity*

2009 **László B. Szabados** (Hungarian Academy of Sciences, DrMTA):
Gravitational conserved quantities and the canonical structure of general relativity

2008 **Daniel Eriksson** (University of Umeå, Sweden; PhD):
Perturbative Methods in General Relativity [http://www.diva-portal.org/umu/theses/abstract.xsql?dbid=1488]

2007 **János Majár** (Eötvös University, Budapest, Hungary; PhD): *Gravitational waves from compact binaries*

2007 **Bence Kocsis** (Eötvös University, Budapest, Hungary; PhD): *Astrophysical applications of gravity waves*

2006 **Viktor Czinner** (Eötvös University, Budapest, Hungary; PhD):
Linear perturbations of the late-time universe in the presence of a cosmological constant

2003 **Burin Gumjudpaj** (Institute of Cosmology and Gravitation, University of Portsmouth, UK; PhD):
Brane-world effects on cosmological dynamics

2002 **Katalin Varjú** (Univ. Szeged, Hungary; PhD): *Quantum tests for non-inertial and general relativistic effects*

FORMER AND PRESENT STUDENTS

Zoltán Kovács http://inspirehep.net/author/Z.Kovacs.1
MSc Thesis (2001): *Reference fluids in canonical gravity*

Zoltán Keresztes http://inspirehep.net/author/Keresztes,+Z.
PhD Thesis (2010): *Randall-Sundrum type II brane-worlds and a tachyonic dark energy model*

Balázs Mikóczi http://inspirehep.net/author/B.Mikoczi.1
PhD Thesis (2011): *Post-Newtonian evolution of compact binaries*

Zsolt Horváth http://inspirehep.net/author/Z.Horvath.3
PhD Thesis: *Gravitational lensing in alternative gravitational theories* (expected in 2012)

Marek Dwornik http://inspirehep.net/author/Dwornik,+M.
PhD Thesis: *Dark matter alternatives tested by galactic rotation curves* (expected in 2013)

PUBLIC UNDERSTANDING OF SCIENCE

English → Hungarian translation:

Brian Greene: The Elegant Universe. Superstrings, Hidden Dimensions and the Quest of a Final Theory
Akkord Publisher, Budapest, 2003, ISBN 963 9429 32 5

Roger Penrose (with A. Shimony, N. Cartwright, S. Hawking): The Large, the Small and the Human Mind
Akkord Publisher, Budapest, 2004, ISBN 963 9429 51 1

Referee of the English → Hungarian translation:

Timothy Ferris: The Whole Shebang. (A State-of the-Universe(s) Report).
Typotex Publisher, Budapest, 2005, ISBN 963 9548 33 2

Editor (with Iván Gyémánt)**:** The last manuscript of Zoltán Bay, Univ. Szeged, 1994 – in Hungarian

Interview on gravitational waves in the DVD documentary: Einstein's finished symphony (2006)

Interview on wormholes in the Hungarian TV Channel 2 (23 October 2005)