

Curriculum Vitae

Personal details

Name Takács, Gábor
Position Full professor
Head of BME "Momentum" Statistical Field Theory Research Group
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Employment

1992-1993 Institute for Theoretical Physics, Eötvös University
Research assistant with scholarship of the Scientific
Qualification Committee
(TMB), Hungarian Academy of Sciences
1993-1996 HAS-Eötvös Theoretical Physics research group, Eötvös
University
assistant research fellow
1996-1997 HAS-Eötvös Theoretical Physics research group, Eötvös
University, Budapest
research fellow
1997-1999 Theory Group of INFN Sezione di Bologna
postdoctoral fellow
1999-2001 Department of Mathematics, King's College London
postdoctoral fellow
2001-2002 Institute for Theoretical Physics, Eötvös University
Magyary Zoltán postdoctoral fellow
2002-2005 Institute for Theoretical Physics, Eötvös University
OTKA postdoctoral fellow
2005-2010 HAS-Eötvös Theoretical Physics research group, Eötvös
University
senior research fellow
2010-2012 HAS-Eötvös Theoretical Physics research group, Eötvös
University
scientific advisor
2012-2014 Institute of Physics, Budapest University of Technology and
Economics
scientific advisor
2012-2017 MTA-BME "Momentum" Statistical Field Theory Research
Group
scientific advisor, head of group

- 2014- Department of Theoretical Physics, Budapest University of
Technology and Economics
full professor
- 2017- BME "Momentum" Statistical Field Theory Research Group
head of group

Education

- 1983-1987 Katona József Gimnázium, Kecskemét (secondary grammar
school)
National Secondary School Competition (OKTV)
mathematics: 9th (1986), 3rd (1987)
chemistry: 10th (1987)
International Chemistry Olympiade, 1987: silver medal
- 1987-1992 Eötvös University, Budapest,
Faculty of Sciences, M.Sc. course in physics
- 1991-1992 Republican Scholarship of Hungarian Republic
- 1992 Diploma (M.Sc.) in physics with distinction
Diploma work topic: Conformal Field Theory
Supervisor: Prof. Zsolt Horváth, Institute for Theoretical
Physics
Thesis: "Investigation of classical A_2 Toda field theory"
- 1992-1993 Scholarship of the Scientific Qualification Committee (TMB),
Hungarian Academy of Sciences
- 1993-1995 Ph.D. student and research assistant, Eötvös University,
Institute for Theoretical Physics
Research topic: Two Dimensional Integrable Field Theories
Supervisor: Prof. Zsolt Horváth
- 1994-1996 Member of Bolyai College, Eötvös University
- 1995-1996 Visiting research student at
Dept. of Applied Mathematics and Theoretical Physics
(DAMTP)
University of Cambridge, Cambridge, UK
Member of Darwin College
Supervisor: Dr. G. M. T. Watts (until March, 1996),
Dr. J. M. Evans (from March, 1996)
Research topic: Integrable and Conformal Field Theories
- 1996 Certificate of Proficiency in English, grade "A"

Academic degrees

- 1996 Ph.D. from Eötvös University with the result "Summa cum
laude"
Thesis: "Free field representation for the form factors of the
 $O(3)$ nonlinear sigma model and its generalizations"

- 2005 Habilitation (dr. habil) from Eötvös University
2008 Doctor of the Hungarian Academy of Sciences (DSc)
DSc thesis: "Finite size effects in quantum field theory"

Scholarships, fellowships and prizes

- 1995-1996 Scholarship of the Cambridge Overseas Trust
1997-1999 INFN postdoctoral fellowship
Theory Group of INFN Sezione di Bologna
1999-2001 PPARC postdoctoral fellowship
Department of Mathematics, King's College London
2001-2002 Magyary Zoltán postdoctoral fellowship, Foundation for
Hungarian Higher Education and Research,
Hungarian Ministry of Education Eötvös University, Institute for
Theoretical Physics
2002-2005 Széchenyi István scholarship, Hungarian Ministry of Education
2002-2005 OTKA postdoctoral fellowship
Eötvös University, Institute for Theoretical Physics
2003 Academy Prize for young researchers, Hungarian Academy of
Sciences
2005-2008 Bolyai János research scholarship, Hungarian Academy of
Sciences
2008 Novobátzky prize, Eötvös Loránd Physical Society
2017 BME's most significant scientific publication 2016
M. Kormos, M. Collura, G. Takács and P. Calabrese,
Nature Physics **13**: pp. 246-249 (2017, online advanced publication: 2016)
2018 BME's most outstanding scientific publication 2013-2017
B. Pozsgay, M. Mestyán, M.A. Werner, M. Kormos, G. Zaránd and G. Takács,
Physical Review Letters **113**:(11) Paper 117203 (2014)

Membership and roles in professional organizations

- 2000- Eötvös Loránd Physics Society
2001-2004 President of the Particle Physics Section of the Eötvös Loránd
Physics Society
2004-2007 Secretary of the Particle Physics Section of the Eötvös Loránd
Physics Society
2006-2010 Physics panel of the Hungarian Scientific Research Fund
2008-2009 Council of Research Units of the Hungarian Academy of
Sciences
2008-2010 Council of the Research Network of the Hungarian Academy
of Sciences
2008-2011 Secretary of the Committee on Particle Physics, Section of
Physical Sciences, Hungarian Academy of Sciences

- 2008- Young Researchers' Council of the Hungarian Academy of Sciences
Coordinator of the physical sciences section (2008-2010)
- 2011-2014 Chairman of the Committee on Particle Physics, Section of Physical Sciences, Hungarian Academy of Sciences
- 2014-2017 Deputy chairman of the Committee on Particle Physics, Section of Physical Sciences, Hungarian Academy of Sciences
- 2014- Supervisory Committee of Bolyai College Foundation
- 2017- Committee on Statistical Physics, Section of Physical Sciences, Hungarian Academy of Sciences
- 2018- Editorial Board of Fizikai Szemle
(monthly journal of Eötvös Loránd Physics Society)

University organisation: roles and responsibilities

- 2014-2017 ELTE Physics Habilitation Committee
- 2014- BME Physics Doctoral School Council
- 2014- BME Physics Habilitation and Doctoral Council
- 2014- BME Faculty of Science Council
- 2015- Secretary of BME Physics Education Committee
- 2015- Deputy director (education), BME Institute of Physics
- 2017- ELTE Science Faculty Habilitation Council

Other professional activities

- 2003-2009 Tutor of the physics section of Bolyai College

Grants (as principal investigator)

- 2001-2003 FKFP 0043/2001 research grant
Integrable and conformal field theories, dynamical symmetries and their applications
- 2002-2005 OTKA D42209 postdoctoral grant
Nonperturbative investigation of two-dimensional quantum field theories
- 2008 NKTH Apponyi Albert (Mecenatúra) grant BOMMRG08
Organization of "Renormalization Group" Bolyai intensive course
- 2008-2012 OTKA K75172 research grant
Correlation functions and finite size effects in two-dimensional quantum field theories
- 2012-2017 LP2012-50/2012 "Momentum" grant of the Hungarian Academy of Sciences
Statistical Field Theory in Condensed Matter
(MTA-BME "Momentum" Statistical Field Theory Research Group)

- 2013-2015 FP7-PEOPLE-2012-IIF (Marie Curie) grant
Project number 330076 "*Quantum Quench*"
Role: scientist-in-charge, fellow: Márton Kormos
- 2013-2015 MTA-CNR Mobility Grant SNK-84/2013
- 2014-2016 MTA Postdoctoral Grant
Role: supervisor, fellow: Tamás Pálmai
- 2016-2020 NKFIH K2016 grant no. 119204
Dynamics of Strongly Correlated Quantum Systems

Organization of schools and conferences

International conferences and schools

- 2003 EUCLID 2003 Summer School on
Nonperturbative methods in low dimensional integrable models
Organizer
- 2004 6th Bologna Workshop on *CFT and Integrable Models*
Member of Scientific Board
- 2006 7th Bologna Workshop on *CFT and Integrable Models*
Member of Scientific Board
- 2008 Bolyai Intensive Course on *Renormalization Group Methods in Physics*
Principal organizer
- 2010 Workshop on *Time-dependent dynamics and non-equilibrium quantum systems*
Organizer
- 2011 35th Johns Hopkins Workshop on *AdS/CFT and its Applications*
Organizer
- 2012 Zalán Horváth Memorial Workshop
Organizer
- 2014 Workshop on *Finite-size Technology in Low Dimensional Quantum Systems (VII)* + Conference on *Integrability in Low Dimensional Quantum Systems*
Organizer

Organizer of Hungarian Summer Schools on Theoretical Physics

- 1997 Nonperturbative results in supersymmetric gauge theories
- 2002 New developments in gauge theories, gravitation and strings
- 2004 Cosmology
- 2005 QCD 2005
- 2006 Experiments and Einstein's theory of gravitation
- 2007 Physics at the LHC

Participation at international schools

- 1992 Winter School on Nuclear and Particle Physics, Schladming, Austria
- 1992 Eötvös Graduate School on "Selected Topics on Quark Confinement", Budapest, Hungary
- 1993 International School on Astroparticle Physics, Budapest, Hungary
- 1994 XXXth Karpacz Winter School on "Quantum Groups" Karpacz, Poland
- 1994 Spring School and Workshop on String Theory, Gauge Theory and Quantum Gravity
International Center for Theoretical Physics, Trieste, Italy
- 1995 Spring School and Workshop on String Theory, Gauge Theory and Quantum Gravity
International Center for Theoretical Physics, Trieste, Italy
- 1995 Les Houches Summer School in Theoretical Physics
Session LXIV on "Quantum Symmetries" Les Houches, France
- 1997 Spring School on String Theory, Gauge Theory and Quantum Gravity
International Center for Theoretical Physics, Trieste, Italy
- 1999 Spring Workshop on String Theory and Related Matters
International Center for Theoretical Physics, Trieste, Italy
- 2001 Summer School on Low Dimensional Quantum Systems
International Center for Theoretical Physics, Trieste, Italy