CURRICULUM VITAE

Personal Data

Name: **Elias Gravanis**

Date of birth: 7 January 1973

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Education

October 2000 – December 2006 PhD in Mathematical Physics

 University of London (King’s College London), United Kingdom

 Supported by a King’s Research Scholarship (KRS)

 Thesis: *Topics in D-brane Physics and brane-inspired Classical Gravity* (advisor: Prof. N.E. Mavromatos)

September 1998 – June 2000 MSc in Physics

 Columbia University, New York, USA

 Supported by a Columbia University Fellowship

September 1992 – June 1997 BSc in Physics

 University of Athens, Athens, Greece

Academic employment history

June 2013 – May 2014 Post-doctoral research fellow in soil mechanics and risk assessment in

 geotechnical applications, Department of Civil Engineering and

 Geomatics, Cyprus University of Technology

January 2013 – September 2013 Post-doctoral research fellow in Hydraulics and Water

 Resources management, International Water Research

 Center (IWRC) NIREAS, University of Cyprus

January 2011 – December 2012 Post-doctoral research fellow in Physics of Fluids and Hydraulics,

 Department of Civil Engineering and Geomatics,

 Cyprus University of Technology

Teaching experience

January 2015 – Present Undergraduate Course, CIV 448, Water Resources Management,

 Department of Civil Engineering and Geomatics,

 Cyprus University of Technology

September 2007 – Present Makariou 46, Nicosia 2572, Dali, Cyprus

 Private institute ‘M. Papageorgiou’

 Tutor of Mathematics and Physics – Responsibilities include tutoring courses for senior high-school students, with emphasis on entrance exams for Cypriot and Greek universities; GCE A-level courses for admission in British universities

October 2000 – December 2006 King’s College London

 Teaching assistant in under- and post-graduate courses on Mathematics and Physics including: calculus, linear algebra, ordinary differential equations, classical mechanics, electromagnetism, quantum mechanics, special and general relativity

September 1998 – June 2000 Columbia University

 Teaching assistant in under-graduate courses on Physics including:

 first and second-year basic physics, quantum mechanics, general relativity

Journal Publications

**•** E. Gravanis, E. Akylas, “Generalized Batchelor functions of isotropic turbulence”, Physics of Fluids 27, 015101 (2015)

**•** E. Gravanis, L. Pantelidis and D. V. Griffiths, “An analytical solution in probabilistic rock slope stability assessment based on random fields”, Int. Journal of Rock Mechanics and Mining Sciences 71, 19-24 (2014)

**•** E. Sarris, E. Gravanis and P. Papanastasiou, “Investigation of self-similar interface evolution in carbon dioxide sequestration in saline aquifers”, Transport In Porous Media 103 (3), 341-359 (2014)

**•** E. Gravanis and E. Akylas, “Stationarity of linearly forced turbulence in finite domains”, Physical Review E84, 046312 (2011)

**•** E. Gravanis, “Shock waves and Birkhoff’s theorem in Lovelock gravity”, Physical Review D82, 104024 (2010)

**•** E. Gravanis, “Conserved charges in (Lovelock) gravity in first order formalism”, Physical Review D81, 084013 (2010)

**•** E. Gravanis and S. Willison, “Singular sources in gravity and homotopy in the space of connections”, Journal of Mathematical Physics 50, 122505 (2009)

**•** C. Garraffo, G. Giribet, E. Gravanis, S. Willison, “Gravitational solitons and C0 vacuum metrics in five-dimensional Lovelock gravity”, Journal of Mathematical Physics 49, 042502 (2008)

**•** E. Gravanis and S. Willison, “‘Mass without mass’ from thin shells in Gauss-Bonnet gravity”, Physical Review D75, 084025 (2007)

**•** E. Gravanis and S. Willison, “Intersecting hypersurfaces, topological densities and Lovelock gravity”, Journal of Geometry and Physics 57, 1861-1882 (2007)

**•** E. Gravanis and S. Willison, “Intersecting membranes in AdS and Lovelock gravity”, Journal of Mathematical Physics 47, 2503 (2006)

**•** E. Gravanis and S. Willison, “Intersecting hypersurfaces in dimensionally continued topological density gravitation”, Journal of Mathematical Physics 45, 4223-4238 (2004)

**•** E. Gravanis and S. Willison, “Israel conditions for the Gauss-Bonnet theory and the Friedmann equation for the brane universe”, Physics Letters B562, 118-126 (2003)

**•** E. Gravanis and N. E. Mavromatos, “Higher-order logarithmic conformal algebras from Robertson-Walker sigma-model backgrounds”, Journal of High Energy Physics 0206, 019 (2002)

**•** E. Gravanis and N. E. Mavromatos, “Vacuum energy and cosmological supersymmetry breaking in brane worlds”, Physics Letters B547, 117-127 (2002)

Conferences

• L. Pantelidis, E. Gravanis, and D.V. Griffiths, “Influence of Spatial Variability on Rock Slope Reliability Using 1-D Random Fields”, IAEG XII Congress, September 15-19 2014, Torino, Italy; G. Lollino et al. (eds.), Engineering Geology for Society and Territory – Vol. 2, Springer International Publishing Switzerland, (2014)

• E. Sarris, E. Gravanis, P. Papanastasiou, “Computational modelling of interface evolution from carbon dioxide sequestration for enhances oil recovery”, International Petroleum Technology Conference (IPTC), 19-22 January 2014, Doha, Qatar

• E. Sarris, E. Gravanis, P. Papanastasiou, “Flow regimes of carbon dioxide injection in porous media”, 10th HSTAM International Congress on Mechanics, 25-27 May 2013, Chania, Greece

• I. Varvaris, E. Gravanis, A. Koussis, E. Akylas, “Nonlinear storage models of unconfined flow through a shallow aquifer on an inclined base and their quasi-steady flow application”, EGU General Assembly 2013, 7-12 April 2013, Vienna, Austria

• E. Akylas, E. Gravanis*, “*Isotropic Turbulence and Periodicity, an alternative comprehensive study”, 5th International Conference of the ERCIM, 1-3 December 2012, Oviedo, Spain

• E. Akylas, S. Kassinos, E. Gravanis, 2011: “Rapidly sheared homogeneous MHD turbulence in a rotating frame”**,** Proc. of 7th International Symposium on Turbulence and Shear Flow Phenomena, Ottawa, Canada, 28–31 July 2011

• E. Gravanis, E. Akylas, 2011: “On the stationarity of linearly forced turbulence in finite domains”, Proc. of 7th International Symposium on Turbulence and Shear Flow Phenomena, Ottawa, Canada, 28–31 July 2011

• E. Akylas, E. Gravanis, M. Fyrillas, “Structure functions in linearly forced isotropic turbulence”, London, 3rd International Conference of the ERCIM, 10-12 December 2010, London, U.K.

# • C. Garraffo, G. Giribet, E. Gravanis, S. Willison, “Vacuum thin-shell solutions in five dimensional Lovelock gravity”, 12th Marcel Grossman Meeting, Paris, July 2009; World Scientific, The Twelfth Marcel Grossmann Meeting, pp. 1964-1966

Citations

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