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# Dr. Timothy Logvinenko

**DATE OF BIRTH:** 21/12/1977 **E-MAIL:** LogvinenkoT@cardiff.ac.uk

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**ADDRESS:** School of Mathematics,

Cardiff University, Senghennydd Road, Cardiff, CF24 4AG, United Kingdom

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### **EDUCATION:**

1984-1988 School #693, Moscow
1988-1993 Specialised Mathematical School #43, Moscow
1993-1995 Methodist College, Belfast

Mathematical Tripes Part HP (2:1) Tripity College

1996-1999 Mathematical Tripos Part IIB (2:1), Trinity College, University of Cambridge
1999-2000 Mathematical Tripos Part III (Merit), Trinity College, University of Cambridge
2000-2004 PhD in Mathematical Sciences (with Dr. Alastair King), University of Bath, UK

2003-2004 Pre-doc (w/ Prof. Eduard Looijenga), Universiteit Utrecht, Netherlands JSPS Postdoctoral Fellowship (with Prof. Shigeru Mukai), RIMS, Japan

**2006-2008** Postdoctoral Fellowship, Institut Mittag-Leffler / KTH, Sweden

**2008-2010** Postdoctoral Fellowship, University of Liverpool, UK

2010-2013 EPSRC PDRA Co-investigator (w/ Prof. Miles Reid), University of Warwick, UK

**2013-2017** Lecturer in Mathematics, Cardiff University, UK

**2017-Present** Senior Lecturer in Mathematics, Cardiff University, UK

**Degrees Held:** BA, MA, MMath in Mathematical Sciences from University of Cambridge

PhD in Mathematical Sciences from University of Bath

# **PUBLICATIONS:**

- 1. T. Logvinenko, "Families of G-constellations over resolutions of quotient singularities", *preprint*, <u>arXiv:math/0305194</u>
- 2. PhD Thesis, University of Bath (2004)
- 3. T. Logvinenko, "Natural G-Constellation Families", *Documenta Math.*, vol. **13** (2008), pp. 803–823
- 4. T. Logvinenko, "Derived McKay correspondence via pure-sheaf transforms", *Math. Ann.*, vol. **341**, no. 1 (2008), pp. 137–167
- 5. S. Cautis and T. Logvinenko,
  - "A derived approach to geometric McKay correspondence in dimension three",
  - J. Reine Angew. Math. 636 (2009), 193-236

- 6. T. Logvinenko, "Reid's recipe and derived categories", *J. Algebra* **324** (2010), no. 8, 2064–2087
- 7. R. Anno and T. Logvinenko, "On adjunctions for Fourier-Mukai transforms", *Adv. in Math.* **231** (2012), no. 3-4, 2069–2115
- 8. R.Anno and T.Logvinenko, "Orthogonally spherical objects and spherical fibrations", *Adv. in Math.* **286** (2016), 338–86
- 9. A. Craw, S. Cautis and T. Logvinenko, "Derived Reid's recipe for abelian subgroups of SL3", J. Reine Angew. Math. 727 (2017), 1-48
- 10. S. Davis, T. Logvinenko and M. Reid, "How to calculate A-Hilb C^n for 1/r(a,b,1,...,1)", *pre-print*
- 11. R. Anno and T. Logvinenko, "Spherical DG-functors", *J. Eur. Math. Soc.* **19** (2017), 2577–2656
- 12. R. Anno and T. Logvinenko, "Bar category of modules and homotopy adjunction for tensor functors", *pre-print* arXiv:1612.09530
- 13. R. Anno and T. Logvinenko, "On uniqueness of P-twists", *pre-print* arXiv:1711.06649
- 14. T. Logvinenko and Rina Anno, "P-functors", in preparation

### **GRANTS**:

3-year EPSRC research grant of £354,105 in "Orbifolds and Birational Geometry" (EP/H023267/1) (as co-investigator with Prof. Miles Reid)(Dec 2009)

2-year Royal Society International Joint Project grant for collaboration with Steklov Institute of Russian Academy of Sciences on a research project titled "Varieties, orbifolds and derived categories" (joint with Prof. Miles Reid) (May 2011)

2-year EPSRC grant of £172,902 to run Warwick EPSRC Symposium 2014-15 on Derived Categories and Applications (EP/L018314/1) (as co-investigator with Prof. Miles Reid and Prof. Toby Stafford) (Dec 2013)

### **AWARDS**:

A research visit award to Max-Planck-Institut für Mathematik at Bonn (Feb-Apr 2010)

A research visit award to CIRM at Trento (May-Jun 2011)

The Roberts' Fund for Researchers award for a research visit to IPMU at Tokyo (Sep 2011)

A research visit award to Korean Institute for Advanced Studies at Seoul (Aug-Sep 2012)

Warwick IAS Vacation School award of £15,000 (Mar 2012)

LMS Scheme 1/Celebrating New Appointments award of £560 (Jul 2013).

LMS Scheme 4/Research in Pairs award of £1090 (May 2014)

Cardiff University International Collaboration Seedcorn Fund grant of £5,043 (Jul 2015)

LMS Scheme 1 award of £2,430 (Sep 2016)

Daiwa Foundation award of £7,000 (Nov 2017)

## **MEMBERSHIPS:**

London Mathematical Society (LMS) EPSRC Peer Review College European Mathematical Society (EMS)

# **CONFERENCES:**

### Main organiser:

"Geometry and Algebra of Orbifolds and the McKay Correspondence", University of Warwick, August 2010

"Russian-British Winter School on the McKay correspondence", University of Warwick, February 2012

Warwick IAS "Summer School on Algebraic Geometry and Theoretical Physics", University of Warwick, July 2012

"Homological Projective Duality and Noncommutative Geometry", University of Warwick, Oct 2012

"COW/Categorically Cardiff: Derived Categories and Algebraic Geometry", University of Cardiff, Oct 2013

Warwick EPSRC Symposium 2014-2015 on Derived Categories and Applications, University of Warwick, Sep 2014 - Aug 2015

"2CinC: COW and Calf in Cardiff", University of Cardiff, Feb 2017

### An invited speaker at:

"Géométrie Algébrique en Liberté (GAEL XII)", CIRM, Luminy, France, April 2004

"Kinosaki Algebraic Geometry Symposium", Kinosaki, Japan, October 2005

"Symplectic varieties and related topics", Hokkaido University, November 2005

"KIAS School on Derived Categories of Coherent Sheaves", KIAS, Seoul, Korea, April 2006

"Moduli spaces and Hilbert Schemes", Institut Mittag-Leffler, October 2006-May 2007

- "COE-COW: International Conference at Algebraic Geometry", University of Tokyo, Japan, December 2008
- "i-MATH School on Derived Algebraic Geometry", Universidad de Salamanca, Salamanca, Spain, June 2009
- "Workshop on Recent Advances in Mathematics at IPMU", IPMU, University of Tokyo, Japan, November 2009
- "Workshop on the McKay Correspondence", University of Nagoya, Japan, March 2010
- "Quotient Singularities Workshop", University of Edinburgh, June 2010
- "Moduli Spaces", Newton Institute, University of Cambridge, Jan-June 2011
- "Computational aspects of birational geometry", NIMS, Daejeon, South Korea, March 2011
- "International conference on algebra and geometry", Institute of Mathematics and Mechanics of Russian Academy of Sciences, August 2011
- "Derived categories in algebraic geometry", Steklov Mathematical Institute of Russian Academy of Sciences, September 2011
- "Conference on resolution of singularities and the McKay correspondence", University of Nagoya, Japan, May 2012
- "Workshop on Essential Dimension and Cremona Groups", Chern Institute of Mathematics, China, June 2012
- "Looking to the Future: The Next Generation of Mathematicians" panel, Isaac Newton Institute, University of Cambridge, June 2012
- "Birational Geometry and Derived Categories", University of Vienna, August 2012
- "The Conference on Algebraic Geometry in Honor of Viktor Kulikov's 60th Birthday", Steklov Mathematical Institute, Moscow, December 2012
- "Higher Dimensional Algebraic Geometry", University of Tokyo, January 2013
- "Triangulations and Mutations", Newcastle University, March 2013

LMS Invited Lectures on "Birational Geometry and Galois Groups", University of Edinburgh, June 2013

"Categorical and Homological Methods in Hopf Algebra", University of Swansea, December 2013

"Triangulated Categories in Algebra, Geometry and Topology", Stefan Banach International Mathematical Center, Warsaw, June 2014

"McKay correspondence, orbifolds, quivers", University of Warwick, September 2014

"EDGE 2015", University of Edinburgh, June 2015

"Categorical and Analytic Invariants in Algebraic Geometry", Steklov Mathematical Institute RAS, September 2015

"Algebraic Geometry in Mexico", CINVESTAV, Mexico, November 2015

"Spherical Functors and Subcategories", University of Cologne, February 2016

"Homological Mirror Geometry", Banff International Research Station, Canada, March 2016

GAeL XXIV (Invited Senior Lecturer), Nesin Mathematics Village, Turkey, June 2016

7th European Congress of Mathematics, Berlin, Germany, Jule 2016

"Categorical and Analytical Invariants in Algebraic Geometry 3", HSE, Moscow, Russia, September 2016

"Algebraic Geometry in Mexico", CINVESTAV, Mexico, November 2016

"Categorical and Analytical Invariants in Algebraic Geometry 4", IPMU, University of Tokyo, Japan, November 2016

"Algebraic Geometry in Mexico", CINVESTAV, Mexico, November 2017

"Landau-Ginzburg models and applications", HSE, Moscow, Russia, December 2017

# **RESEARCH STUDENTS:**

Lorenzo de Biase (2015-now) Christopher Seaman (2016-now)

### **TEACHING:**

Supervision of undergraduates at the University of Cambridge

Undergraduate problem classes at the University of Bath

Graduate-level lecture courses ("Donaldson-Thomas invariants for toric threefolds" and "Derived categories for beginners") at KTH, Stockholm (2008)

1st year undergraduate lecture course "Introduction to Geometry"

at the University of Warwick (Autumn semesters of 2010, 2011 and 2012)

Graduate-level lecture course "Introduction to derived categories and their applications in algebraic geometry" at the University of Warwick (Spring semester, 2011)

Graduate-level lecture course "Grothendieck-Serre Duality: a modern approach" at the University of Warwick (Spring semester, 2012)

1st year undergradyate lecture course "Geometry"

at Cardiff University (Autumn semesters of 2014-17)

2nd year undergraduate lecture course "Linear algebra"

at Cardiff University (Spring semesters of 2013-14 and 2016-17)

4th year (MMATH) undergraduate reading course "Algebraic Geometry"

at Cardiff University (Spring semester of 2014, Autumn Semester 2015-17)

# LANGUAGES (other than English):

Russian (Fluent), Japanese(Fluent), French (Reading proficiency)