

Timothy John Sullivan

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Academic history

- 2005–present: Ph.D. student in mathematics by research; Mathematics Institute, University of Warwick, Coventry, U.K. Supervisor: Dr Florian Theil (Warwick).
 - ▶ 16 March–5 May 2007: Visiting student researcher at the Graduate Aeronautical Laboratories, California Institute of Technology, Pasadena, U.S.A., guest of Prof. Michael Ortiz.
- 2004: Master of Mathematics with first class honours; University of Warwick, Coventry, U.K. Supervisor: Dr Luca Sbrano (Warwick).
 - ▶ Final year dissertation: “Linearized dynamics of oscillating lattices — A spatial discretization of the wave equation.” Supervisor: Prof. Gero Friesecke (T.U. München/Warwick).
 - ▶ Essays on coding theory, number theory and wavelet analysis.
- 2000: G.C.E. ‘A’ levels in Mathematics, Further Mathematics, Physics, History and General Studies, all at grade A; Hymers College, Kingston-upon-Hull, U.K.

Research interests

- Rate-independent plasticity theory; derivation of rate-independent models as scaling limits of viscous systems with stochastic wiggly energies.
- Variational characterizations of dissipative systems at non-zero temperature: applications to creep laws and dynamic friction.

Publications

1. (With M. Koslowski, M. Ortiz & F. Theil) “On the behaviour of dissipative systems in contact with a heat bath: Application to Andrade creep”, submitted to the *Journal of the Mechanics and Physics of Solids*, July 2008.
2. (With F. Theil) “Deterministic stick-slip dynamics in a one-dimensional random potential”, to appear in *Oberwolfach Reports* for the meeting “Analysis and numerics for rate-independent processes”, 26 February–2 March 2007.

Conferences and meetings attended

1. October 2007–present: *Warwick Mathematics Institute Postgraduate Seminar*, University of Warwick, Coventry, U.K. Organizer.
2. 17–18 September 2007: *Microscopic Models of Plastic Evolution*, University of Warwick, Coventry, U.K. Organizer and speaker.

3. 30 April–1 May 2007: *Third Annual Structured Integrators Workshop*, University of Southern California, Los Angeles, U.S.A. Invited participant and speaker.
4. 16 March–5 May 2007: Graduate Aeronautical Laboratories, California Institute of Technology, Pasadena, U.S.A. Visiting student researcher and invited speaker, guest of Prof. Michael Ortiz.
5. 25 February–2 March 2007: *Analysis and Numerics for Rate-Independent Processes*, Mathematisches Forschungsinstitut Oberwolfach, Germany. Invited participant and contributing speaker.
6. 19–20 January 2007: *Opening Colloquium of the Hausdorff Centre for Mathematics*, Bonn, Germany. Participant.
7. 11–23 September 2006: *Fifth Prague Summer School: Mathematical Statistical Mechanics*, Centre for Theoretical Study, Charles University, Praha, Czech Republic. Participant and contributing speaker.
8. 15–17 December 2003: *IBM EMEA Top Student Recognition Event*, Hursley Park, U.K. Invited participant.
9. 19–25 July 2002: *Ninth International Mathematics Competition for University Students*, Uniwersytet Warszawski, Warszawa, Poland. Participant, representing the University of Warwick.

Academic employment and teaching experience

- 2007–2008: Assistant module leader for the reading module *Advanced Partial Differential Equations*. Set syllabus, reading list and final exam, as well as conducting weekly support classes for the students taking the module.
- March–June 2007: Residential and teaching assistant for the National Academy for Gifted and Talented Youth *Gaia Island* programme, a web-based learning programme for 14–15 year-olds. Responsibilities included providing academic guidance to two groups of six students and moderating the project’s discussion forums.
- 2005–present: Teaching assistant for undergraduate mathematics modules at the University of Warwick. Modules taught include *Analysis I, II & III*, *Differentiation*, *Metric Spaces*, *Consolidation* and *Calculus of Variations*. Responsibility ranges from auxiliary teaching to primary responsibility for delivery of module material, depending on the module.
- 2002–04, 2005–present: Supervisor of first- and second-year undergraduate students in groups of four. Responsibilities include general help and feedback, as well as marking of weekly/fortnightly module-based assignments.

References

Undergraduate project supervisor	Ph.D. supervisor	Employment reference
Prof. Gero Friesecke Zentrum Mathematik der Technischen Universität München Boltzmannstrasse 3 D-85748 Garching-bei-München Germany gf@ma.tum.de Tel. +49-89-289-17905	Dr Florian Theil Mathematics Institute University of Warwick Coventry CV4 7AL U.K. f.theil@warwick.ac.uk Tel. +44-24-7652-2651 Fax. +44-24-7652-4182	Dr David Wood Mathematics Institute University of Warwick Coventry CV4 7AL U.K. david.wood@warwick.ac.uk Tel. +44-24-7652-3592 Fax. +44-24-7652-4182