

CURRICULUM VITAE

SIGBJØRN HERVIK

ADDRESS

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PERSONAL DETAILS

Date of birth: 7th September 1976
Nationality: Norwegian, Canadian Permanent Resident
Languages: Norwegian (native), English (fluent)

EDUCATION

- Aug '95-May '98 Undergraduate Studies (**Cand. mag.**) at the Faculty of Mathematics and Natural Science, University of Oslo, Norway.
- Jun '98-Dec '99 **Cand. Scient.** studies at Department of Physics, University of Oslo. Supervisor: Prof. Ø. Grøn. Thesis title: *Canonical Cosmology: Towards a Gravitational Entropy?*
- Apr '01-Feb '04 **PhD** studies in Applied Mathematics and Theoretical Physics at DAMTP, Cambridge University. Funded by The Research Council of Norway and an Isaac Newton Studentship.
Supervisor: Prof. John D. Barrow. Thesis title: *Mathematical Cosmology: Bianchi models, Asymptotics and Extra dimensions.* Submitted Feb 6, 2004. The degree of **PhD** conferred Oct 16, 2004.

WORKING EXPERIENCE

- 2008 - Present Professor in applied mathematics, University of Stavanger.
- 2006 - 2008 Assistant Professor, teaching "Mathematics for Commerce", Dalhousie University.

- 2004 - 2008 PostDoc, Dalhousie University, Halifax, NS, Canada, with Prof. Alan A. Coley.
- 1997 - 1999 Teaching Assistant for various courses at the Department of Mathematics (MA001) and Department of Physics (FYS050, FYS201 and FYS211) , University of Oslo.
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AWARDS/ACHIEVEMENTS

- 2010 Awarded a 3-month Leiv Eirikson mobility grant (NFR) for a research stay at Dalhousie Univeristy, April - June 2010. Project No:**200910/V11**.
- 2008 - Present Adjunct Professor at Dalhousie University, Halifax, NS, Canada.
- 2006 Paper entitled "The late-time behaviour of vortic Bianchi type VIII universes" (with W.C. Lim) *Class. Quant. Grav.* **23** (2006) 3017, elected by the Editorial Board to one of CQG's highlights in 2005-2006. It was also selected as an IOP Select paper.
- 2006 Essay entitled "Cosmology: a bird eye's view" (with A.A. Coley and W.C. Lim) received an honorable mention in the Gravity Research Foundation Essay Competition 2006.
- May '06-May '07 AARMS PDF award winner
- 2005 Paper entitled "Future Asymptotic behaviour of Tilted Bianchi models of type IV and VII_h" (with R.J. van den Hoogen and A.A. Coley) *Class. Quant. Grav.* **22** (2005) 607, elected by the Editorial Board to one of CQG's highlights in 2004-2005.
- May '04-May '06 Killam PDF award winner, Dalhousie University.
- Jan '04-Jun '04 AARMS PDF award winner.
- 2004 Fellow of the Cambridge Overseas Society.
- 2003 Received a Rayleigh-Knight prize (2nd prize), University of Cambridge, for an essay entitled "Multidimensional Cosmology: Spatially homogeneous models of dimension 4+1" (enlarged and revised version of paper published in CQG).
- 2003 Paper entitled "The Weyl tensor in spatially homogeneous cosmologies" (with J.D. Barrow) *Class. Quantum Grav.* **19** (2002) 5173, elected by the Editorial Board to one of CQG's highlights in 2002-2003.
- Oct '02-Apr '04 Isaac Newton Studentship, University of Cambridge.
- 2001 Honorary Cambridge Overseas Scholar.
- Apr '01-Mar '04 Doctoral Fellow of the Research Council of Norway.
- 1995 Participant of the XXVI International Physics Olympiad in Canberra, Australia 1995.

PUBLICATIONS

- 56 papers accepted or published in refereed journals by April 2010 (see separate list of publications).
- Textbook: *Einstein's General theory of Relativity: With modern applications in Cosmology* (with Ø. Grøn), Springer: New York, 2007.

PRESENTATIONS/SEMINARS

1. *Anisotropic Inflation – a serendipitous journey from Ricci nilsolitons to the CMB*, Astrofysisk Institutt, UiO, 2010.
2. *Dynamical Systems in Cosmology – A mathematical smorgasbord*, CMA, UiO, 2010.
3. *Big Bang – Hva skjedde?*, Researcher's night, Forskningsdagene, Sandnes, 2009.
4. *Universet – fra fallende epler til Big Bang!*, Barneuniversitetet, Forskningsdagene, Stavanger, 2009.
5. *Studiet av Universet – et tveegga sverd*, Årsmøte i NAF, Sandnes, 2009.
6. *Cosmology: a materialistic perspective*, Norsk Fysisk Selskaps Årsmøte, Røros, 2009.
7. *Universets Fortid, Nåtid og fremtid: Hva sier egentlig relativitetsteorien om dette?*, SAF, Stavanger, 2008, and UiS, 2009.
8. *Sophus Lie*, UiS, 2008.
9. *Curvature Projectors and 4D CSI Spacetimes*, NIKHEF, Amsterdam, Netherlands, 2007.
10. *On 4D CSI spacetimes*, Atlantic mini-conference in Relativity, Antigonish, NS, Canada, 2007.
11. *CSI spacetimes and supergravity*, 13th CCGRRA conference, Fredericton, NB, Canada, 2007.
12. *Fluid Observers and Tilting Cosmology*, University of Oslo, Norway, 2006.
13. *Spacetimes with Constant Curvature Invariants*, 11th Marcel Grossmann Meeting, Berlin, Germany, 2006.
14. *Anisotropically Inflating Universes*, 11th Marcel Grossmann Meeting, Berlin, Germany, 2006.
15. *Spacetimes with Constant Curvature Invariants*, CMS Summer 2005 meeting, University of Waterloo, Ontario, Canada

16. *Symmetries and Lie Groups*, Dept. of Mathematics and Statistics, Dalhousie University, 2005.
17. *Brane waves and Bianchi models*, Santa Clara, Cuba, 2005.
18. *Lie Groups, Lie algebras and Homogeneous spaces and Homogeneous Solvmanifolds, Generalised Heisenberg groups and Black Holes*, Dept. of Mathematics and Statistics, Dalhousie University, 2004.
19. *Negatively curved left-invariant metrics on Lie groups*, CMS Summer 2004 meeting, Halifax, NS, Canada
20. *The Future of Tilted Bianchi Universes*, GR17 meeting, Dublin, Ireland, 2004.
21. *Homogeneous Solvmanifolds, Generalised Heisenberg groups and Black Holes*, University of Nottingham, UK, 2003.
22. *The Weyl Curvature Conjecture for spatially homogeneous cosmological models*, Queen Mary and Westfield, London, UK, 2003
23. *The physics of extra dimensions*, Churchill College annual conference on everything, Cambridge, UK, 2003.
24. *Bianchi type I cosmology*, Theoretical Physics group, Department of Physics, University of Oslo, 2003.
25. *Chaos and Brane-worlds*, JENAM-VFC, Porto, Portugal, 2002.
26. *Lie Groups, Lie algebras and Homogeneous spaces*, DAMTP, Cambridge University, UK, 2002.
27. *The Weyl curvature Conjecture*, Dalhousie University, Halifax, Canada, 2002.
28. *Spacetimes with non-trivial topologies*, DAMTP, Cambridge University, UK, 2001.

MISCELLANEOUS

- Have been a reviewer for The American Mathematical Society since March 2001. (approx. 60 papers and 3 books by December 2009)
- Have refereed papers for *Gen. Rel. and Grav.*; *J. of Geom. and Phys.*; *Astroph. and Space Science*; *Indian J. of Pure and Appl. Math.*; *Int. J. Mod. Phys. A & D*; *J. Phys. A: Math. Theor.*; *Physica Scripta*; *Astrophysical J.*; and *Classical and Quantum Gravity*.
- Life Member of the International Society on General Relativity and Gravitation.
- Member of Norsk Fysisk Selskap and Norsk Matematisk Forening.