

John Olsen

ADDRESS

UR Mathematics
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<http://www.johnno.dk>

EDUCATION

- 2009 **PhD mathematics** University of Pennsylvania.
Research interests: Riemannian geometry, algebraic topology, Morse Theory.
Thesis: Three Dimensional Manifolds All of Whose Geodesics Are Closed.
<http://www.johnno.dk/mathematics/penn-thesis.pdf>
Advisor: Prof. Wolfgang Ziller.
- 2004 **Cand. Scient. (MSc) mathematics** University of Aarhus.
Thesis: Topological Investigations of Positively Curved Manifolds.
<http://www.johnno.dk/mathematics/speciale.pdf>
Advisor: Prof. Karsten Grove and Prof. Jørgen Tornehave.
- 2002 **Bac.scient. (BSc) mathematics**, University of Aarhus.
Thesis: The Schwarzschild Metric (in Danish).
<http://www.johnno.dk/mathematics/schmetrik.pdf>
Advisor: Prof. Marcel Bökstedt.
Minor: Physics and chemistry.

POSITIONS

- 2009– Visiting Assistant Professor at the University of Rochester.
- 2007–2009 Graduate student at the University of Pennsylvania.
- Fall 2006 Visiting position at the University of Pennsylvania.
- Spring 2006 Visiting position at the University of Maryland.
- 2004–2007 Scientific assistant at the University of Münster.
Advisor: Prof. Dr. Burkhard Wilking.

PUBLICATIONS

Three Dimensional Manifolds All of Whose Geodesics Are Closed. Published by the Annals of Global Analysis and Geometry.
Available at <http://www.springerlink.com/content/5q56jw1665415617/>

TEACHING EXPERIENCE

INSTRUCTOR

- Spring 2010 University of Rochester: *MTH 162 (Calculus IIa)*, *MTH 250 (Introduction to Geometry)*.

- Fall 2009 University of Rochester: *MTH 142 (Calculus II), MTH 162 (Calculus IIa)*.
- Summer 2009 University of Pennsylvania: *Math 240 (Calculus III)*.
- Summer 2008 University of Pennsylvania: *Math 115 (Probability and Matrices)*.

COURSE COORDINATOR

Mathematical Analysis 4: My duties were to organize recitations, prepare problem sets and exams, organize review sessions, grade exams, and assist during oral examinations. I also held four lectures.

TEACHING ASSISTANT

- Spring 2008 University of Pennsylvania: *Math 240 (Calculus III)*.
- Fall 2007 University of Pennsylvania: *Math 240 (Calculus III)*.
- Fall 2004 University of Münster: *Mathematical Analysis 1*.

OUTREACH

Responsible for the High School Visiting Program, University of Aarhus: We gave lectures and organized problem sessions for high school students. Our main aim was to get gifted students interested in mathematics by giving talks about advanced mathematical topics.

Responsible for "Natur i tellet", University of Aarhus: "Natur i Tellet" is part of the science popularization project of the Faculty of Science. As one of a group of 10 people I talked to secondary school children about various interesting (and entertaining!) mathematical topics.

Mattetivoli, University of Oslo: "Mattetivoli" is similar to "Natur i Tellet"

MENTORING

Math 240 (Calculus III): Held the Sunday review.

Seminars "Geometry of Surfaces" and "deRham Cohomology and Characteristic Classes": I organized the material for the individual talks and helped the students prepare their talks.

TEACHING WORKSHOPS

- 2008–2009 Participated in five teaching workshops sponsored by the Center for Teaching and Learning, University of Pennsylvania.
- Fall 2007 Participated in the "TA Training" workshop, Department of Mathematics, University of Pennsylvania.

TALKS

INVITED TALKS

"Three Dimensional Manifolds All of Whose Geodesics Are Closed", Department of mathematics, University of Toronto, Winter 2010.

"Closed Geodesics", Colloquium, Department of Mathematics, University of Rochester, Winter 2010.

"Three Dimensional Manifolds All of Whose Geodesics Are Closed", Department of mathematics, Tulane University, Winter 2010.

"Three Dimensional Manifolds All of Whose Geodesics Are Closed", Department of Mathematics, University of Copenhagen, Winter 2010.

"Three Dimensional Manifolds All of Whose Geodesics Are Closed", Pacific Northwest Geometry Seminar, Fall 2009.

"Three Dimensional Manifolds All of Whose Geodesics Are Closed", Department of Mathematics, University of Rochester, Fall 2009.

"Geometry of Surfaces", Penn Mathematical Society, University of Pennsylvania, Spring 2009.

STUDENT SEMINARS AT THE UNIVERSITY OF PENNSYLVANIA AND THE UNIVERSITY OF MÜNSTER

“The Berger Conjecture in Dimension 3”, Geometry-Topology Reading Seminar.

“Torus Actions on Quasi-positively Curved Manifolds”, “Division Algebras”, “Existence of Closed Geodesics”,

“Index of Iterated Geodesics”, “Morse Theory on the Free Loop Space” and “The Connectedness Principle”,

Geometry-Topology Student seminar.

“The Connectedness Principle” and “Closed Geodesics”, the Differential Geometry Seminar.

CONFERENCES ATTENDED

- Winter 2010 “Pacific Northwest Geometry Seminar”, Stanford University.
- Fall 2009 “Pacific Northwest Geometry Seminar”, Portland State University.
- Spring 2009 “2009 Georgia International Topology Conference”, University of Georgia.
- Spring 2008 “Global Riemannian Geometry”, Unidad Cuernavaca, Mexico.
- Spring 2008 “String Topology and the Topology of Moduli Spaces”, Stanford University.
- Spring 2008 “Southern California Geometric Analysis Seminar”, University of California at Irvine.
- Fall 2006 “The Future of Global Differential Geometry”, University of Maryland.
- Summer 2006 “Global Differential Geometry”, University of Münster.
- Spring 2006 “Geometry Festival”, University of Pennsylvania.
- Summer 2005 “Curvature and Global Shape”, University of Münster.
- Summer 2004 “Collapsing and Metric Geometry”, University of Münster.
- Spring 2004 “Ski og Matematikk”, Rondane, Norway.
- Fall 2003 “Geometry and Global Analysis”, DTU, Denmark.
- Summer 2003 “SUP-symposium”, University of Oslo, Norway.
- Summer 2002 “Motivic Homotopy Theory”, Nordfjordeid, Norway.
- Summer 2001 Danish Mathematical Society Summer School.

PROFESSIONAL SERVICE

- 2000–2002 Served as chairman and member of the board of “Friends of Euler” (Eulers Venner), the local mathematics community at the Department of Mathematics, Aarhus University.
- 2001–2003 Member of the committee 2.delsudvalget, Department of Mathematics, Aarhus University. The committee deals with subjects concerning graduate studies and courses.
- 2002–2004 Member of the committee Lokaleudvalget, Department of Mathematics, Aarhus University. The committee deals with the distribution of offices and premises in general.

SKILLS

LANGUAGE KNOWLEDGE: Danish (native), English (fluent) and German (fluent).

COMPUTER SKILLS: Advanced knowledge of typesetting with \LaTeX , Java programming, Staroffice and Office. Knowledge of Maple and SAS.

REFERENCES

- Prof. Wolfgang Ziller, University of Pennsylvania
Email: wziller@math.upenn.edu Thesis advisor
- Prof. Karsten Grove, University of Notre Dame
Email: kgrove2@nd.edu Research reference
- Prof. Christopher Croke, University of Pennsylvania
Email: ccroke@math.upenn.edu Research reference
- Prof. Nancy Hingston, The College of New Jersey
Email: hingston@tcnj.edu Research reference
- Prof. Antonella Grassi, University of Pennsylvania
Email: grassi@math.upenn.edu Teaching reference
- Prof. Johan P. Hansen, University of Aarhus
Email: matjph@imf.au.dk Teaching reference