Curriculum Vitae of M.H.M.J. Wintraecken

Personalia

Name:	Mathijs Hubertus Maria Johannes Wintraecken
Birthday:	18^{th} of januari
Email:	m.h.m.j.wintraecken@gmail.com

Education

September 2015:	PhD. Mathematics at Rijksuniversiteit Groningen
October 2009:	MSc. Mathematical Sciences (cum laude) at Utrecht University
August 2009:	MSc. Theoretical Physics at Utrecht University
January 2007:	BSc. Mathematics (cum laude) at Utrecht University
January 2007:	BSc. Physics (cum laude) at Utrecht University.
June 2003:	Gymnasium at K. S. G. De Breul, Zeist. 'Natuur en Techniek', 'Natuur en Gezondheid' together with Latin, Economics I & II and Geography.

Theses

Ambient and intrinsic triangulations and topological methods in cosmology	PhD thesis
Confluence of singular fibers on rational elliptic surfaces	Master's thesis Mathematical Sciences
Cylinder amplitudes in 2D quantum gravity	Master's thesis Theoretical Physics
Geodesics and connections	Bachelor's thesis Mathematical Sciences

Publications

Conference papers

1. R.H. Dyer, G.Vegter and M.H.M.J.Wintraecken. Riemannian Simplices and Triangulations. *SOCG2015*

Published in Journals

2. M.H.M.J.Wintraecken and G.Vegter. A geometrical take on invariants of low-dimensional manifolds found by integration. *Topology and its Applications, 160: 21752182, 2013*
3. M.H.M.J.Wintraecken and G.Vegter. On the Optimal Triangulation of Convex Hypersurfaces, Whose Vertices Lie in Ambient Space. *Mathematics in Computer Science, Online, 2014*
4. R.H. Dyer, G.Vegter and M.H.M.J.Wintraecken. Riemannian Simplices and Triangulations. *Geometricae Dedicata, Online, 2015*

Submitted to Journals

5. Rien van de Weygaert, Pratyush Pranav, Bernard J.T. Jones, E.G. Patrick Bos, Gert Vegter, Herbert Edelsbrunner, Monique Teillaud, Wojciech A. Hellwing, Changbom Park, Johan Hidding, Mathijs Wintraecken. Probing Dark Energy with Alpha Shapes and Betti Numbers.

In preparation

6. G.Vegter and M.H.M.J.Wintraecken. The intrinsic and extrinsic properties of triangulations of Riemannian manifolds.
7. G.Vegter and M.H.M.J.Wintraecken (tentative). On Fejes Tóths triangulation of the hyperboloid. (Section 2.4 of my PhD thesis)
8. Ramsay Dyer, Gert Vegter and Mathijs Wintraecken. Large barycentric coordinate neighbourhoods of intrinsic Riemannian simplices (Combines Sections 3.4 and 3.6 of my PhD thesis)
9. Ramsay Dyer, Gert Vegter and Mathijs Wintraecken. Intrinsic Riemannian simplices and triangulations of manifolds with (locally) nearly constant curvature (Section 3.10 of my PhD thesis)
10. Mathijs Wintraecken, Rien van de Weijgaert, Bernard T. Jones and Gert Vegter (tentative). Bounds on Betti numbers for Gaussian random fields in three dimensions (Chapter 6 of my PhD thesis)
11. Pratyush Pranav, Herbert Edelsbrunner, Rien van de Weygaert, Michael Kerber, Bernard J.T. Jones, Gert Vegter and Mathijs Wintraecken. On the Betti of the Universe, and Her Persistence.

Workshop contributions

M.H.M.J.Wintraecken and G.Vegter. A conceptual take on invariants of low-dimensional manifolds found by integration. *EUROCG2013*
Ramsay Dyer, Gert Vegter and Mathijs Wintraecken. Intrinsic simplices on Riemannian manifolds. *EUROCG2014*

Teaching experience

Courses

2009	Teaching Assistant for 'Mechanica 2' (Advanced Mechanics) at the Department of Physics and Astronomy of Utrecht University.
2010-2013	Teaching Assistant for Group theory at the Rijksuniversiteit Groningen
2010-2013	Teaching Assistant for Geometry at the Rijksuniversiteit Groningen

Bachelor students (in an official capacity)

Student: Sanne Jonker	Thesis title: Hyperbolic geometry Year of graduation: 2011-2012

Extra curricular activities

September 2004 - September 2007:	Member of the Educational Advice Committee of the Mathematical Institute of Utrecht University.
2011-2014	Secretary student society W^4?.