

Curriculum Vitae

Willem Adriaan Salm

a.k.a. Andries Salm

willem.salm.19@ucl.ac.uk

4 Park Avenue,
London, NW11 7SJ
United Kingdom

Education

University College London - Aug. 2019 – June 2023

Heriot-Watt University - Sep. 2018 – Aug. 2019

Doctor of Philosophy Mathematics

Supervisor: Dr. Lorenzo Foscolo

The overall aim this project is the construction of non-compact gravitational instantons of type $AL\{F, G, G^, H, H^*\}$. This is done by gluing \mathbb{Z}_2 -quotients of Gibbons-Hawking spaces to Atiyah-Hitchin manifolds and perturbing the glued metric using a Banach version of the inverse function theorem. For this we had to construct a Fredholm framework on these spaces to solve elliptic PDE's.*

Utrecht University - Sep. 2015 – Jul. 2018

Double Masters (honours) Mathematical Sciences and Theoretical Physics

Average: 7.92 of 10

Thesis: The Atiyah-Singer index theorem and its applications to anomalies in particle physics. Supervisors: Prof. Eric Laenen and Dr. Gil Cavalcanti.

Utrecht University - Sep. 2012 – Jul. 2015

Double Bachelors Mathematics and Physics

Average: 8.34 of 10, **Cum Laude**

Thesis: The Gauss-Bonnet theorem. Supervisor: Dr. G.R. Cavalcanti.

Publications

A Kummer construction for gravitational instantons with non-maximal volume growth.

Paper in preparation

Selected talks and presentations

Special Geometries on Riemannian Manifolds - Okt. 14 2021

University of Montreal - Poster presentation

Oxford-London Gauge Assembly - Jun. 24 2021

Online - Poster presentation

Junior-Geometry Seminar - May 28 2021

Imperial College London

KCL/UCL Junior-Geometry Seminar - Jan. 28 2021

University College London

Geometric Analysis Seminar - Nov. 26 2020

University College London

Oxford-London Gauge Assembly - Aug. 20 2020Online - *Poster presentation***Postgraduate Seminar** - Jan. 14 2020

University College London

Annual Progression Presentations - Jun. 19 2019

Heriot-Watt University

Mini-Symposium Day - May. 2019

University of Edinburgh

Teaching experience**University College London**Demonstrator, *Algebra 3* - Sep. 2021 – Dec. 2021Developer, *Automated marking of online assessments* - Jan. 2021 – Mar. 2021Demonstrator, *Algebra 3* - Sep. 2020 – Dec. 2020Teaching Assistant, *Algebra 2* - Jan. 2019 – Mar. 2020**Heriot-Watt University**Teaching Assistant, *Discrete Mathematics* - Jan. 2018 – Mar. 2019**Maxwell Institute of Mathematics**

Teaching Training Program - Sep. 2018 – Jul. 2019

Work experience**Minded Digitaal Kantoor B.V.** - Jan. 2010 – Sep. 2018**Software engineer****Artists in Science** - Sep. 2012 – Apr. 2015**Co-founder**

Artists in Science was a start-up with its main product 'slimsporen'. It was based on a research project about car-navigation I did during high school. I developed an app that could calculate the most economical way to travel using public transport.

Additional skills & other interests**Programming**

Proficient at multiple computer languages from languages in webdevelopment like html/javascript/php and low-level languages like java/C++. Also proficient in multiple computer algebra systems like **Mathematica/Maxima/Sagemath/Form**

3d modelling

Modelling and 3d printing mathematical shapes like Kummer surfaces, Fractals and Hopf fibrations.

References**Dr. Lorenzo Foscolo** - Supervisor

University College London

E-mail: *l.foscolo@ucl.ac.uk*

Phone: +44 (0)20 7679 7896

Prof. Bernd Schroers

Heriot-Watt University Edinburgh

E-mail: *b.j.schroers@hw.ac.uk*

Phone: +44 (0)131 451 8247

Prof. Michael Singer

University College London

E-mail: *michael.singer@ucl.ac.uk***Dr. Isidoros Strouthos** - Teaching

University College London

E-mail: *i.strouthos@ucl.ac.uk*