

## Curriculum Vitae

Willem Adriaan Salm  
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## Education

**University College London** - Aug. 2019 – present

**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 2020

Online - *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. 2021

Developer, *Online assesment questions* - Jan. 2021 – Mar. 2021

Demonstrator, *Algebra 3* - Sep. 2020 – Dec. 2020

Teaching 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++**.

### 3d modelling

**Modelling and 3d printing** mathematical shapes like Kummer surfaces, Frac-tals and Hopf fibrations.

## References

**Dr. Lorenzo Foscolo** - Supervisor

University College London

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**Prof. Bernd Schroers**

Heriot-Watt University Edinburgh

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Phone: +44 (0)131 451 8247

**Prof. Michael Singer**

University College London

E-mail: [michael.singer@ucl.ac.uk](mailto:michael.singer@ucl.ac.uk)

**Dr. Isidoros Strouthos** - Teaching

University College London

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