

## OVERVIEW

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**Math:** geometry & topology ([A.B. Princeton](#), [M.Sc. Uni Bonn](#), graduate work [TU & Uni Wien](#)).

**Art:** transdisciplinary (current [M.A. Angewandte Wien](#)).

My interests are not only in problem-solving but also problem-understanding.

Handling abstract concepts from both technical and creative perspectives is something at which I excel.

## SKILLS

**Computer:** bash, GIMP, git, Inkscape,  $\text{\LaTeX}$ , Linux (Debian), office programs, R, Racket, vim.

**Languages:** English (native), German (ca. C1), Polish (ca. A1).

**Soft:** processing complicated data,  
teaching difficult topics to others,  
creating from abstraction,  
documenting complex structures.

## EDUCATION

**Universität für angewandte Kunst Wien**, Vienna, Austria

M.A. in [Transdisciplinary Art \(TransArts\)](#)

October 2020 –

**Technische Universität Wien**, Vienna, Austria

Ph.D. in [Mathematics](#)

**Supervisor:** [Prof. H. Pottmann](#) (October 2016 – July 2020)

October 2016 –  
(looking for new project)

**Universität Bonn**, Bonn, Germany

M.Sc. in [Mathematics](#)

**Thesis** with [Prof. C. F. Bödigheimer](#): *From Green's Functions to Chord Spaces, for the Punctured 2-Disk*

October 2012 – September 2015  
Weighted GPA: 2.1 (81%)

**Princeton University**, Princeton, NJ, U.S.A.

A.B. in [Mathematics](#)

**Thesis** with [Asst. Prof. G. Holzegel](#): *(In)completeness in Riemannian, and Lorentzian, Geometries via the Calculus of Variations*

September 2008 – June 2012  
Dept. GPA: 3.35 of 4 (B+)

## WORK EXPERIENCE

**Deloitte Österreich**, *FSI Auditor*, Vienna, Austria

Worked on developing R code to help audit bank portfolios according to IFRS9

9 January – 30 September 2023

**Universität Wien, Student Service Center Mathematics**, Vienna, Austria

Managed and helped translate the website, helped scripting tasks

1 July 2022 – 30 June 2023

**Technische Universität Wien, Project Assistant**, Vienna, Austria

— Researched about special classes of geometric surfaces in an [EU project](#) and third-party projects  
— Developed C++ code to optimize meshes of geometrical surfaces for application in architecture

1 October 2016 – 31 December 2020

**SAP Service & Support Centre**, *Computer Analyst (Support Engineer)*, Dublin, Ireland

Worked on insurance software development

14 March – 13 September 2016

**Universität Bonn Fachbibliothek Mathematik**, *Studentische Hilfskraft (Student Assistant)*, Bonn, Germany

— Managed, weekly, the front desk of the Mathematics library

April 2013 – September 2015

**Max Planck Institute for Mathematics**, *Wissenschaftliche Hilfskraft (Scientific Assistant)*, Bonn, Germany

—  $\text{\LaTeX}$ -ed several chapters for the fourth edition of Prof. Dale Husemöller's textbook *Fibre Bundles*, under supervision of Dr. Alexander Weisse  
—  $\text{\LaTeX}$ -ed a few other smaller papers/files for Prof. Husemöller and Dr. Weisse

March 2013 – June 2015

## PUBLICATIONS & PREPRINTS

Jimenez, M.R., *Note on Surfaces of Revolution with an Affine-Linear Relation between their Curvature Radii*, [arXiv preprint](#).

Jimenez, M.R., Müller, C. & Pottmann, H., *Discretizations of Surfaces with Constant Ratio of Principal Curvatures*, Discrete Comput. Geom. (2019). [doi:10.1007/s00454-019-00098-7](#)

## CONFERENCES

- XXI. Generative Art Conference**, Verona, Italy 18 – 20 December 2018  
*Talk* with María Lara Miró: *From Lines to Circles: Rethinking Design Coordinates*
- Solid and Physical Modeling 2018**, Bilbao, Spain 11 – 13 June 2018  
*Poster*: *Interactive Geometric Design: Constraints Imposed by Function and Fabrication*
- Geometry Workshop in Obergurgl 2017**, Obergurgl, Austria 21 – 26 September 2017  
*Talk*: *Discrete Weingarten Surfaces from Strips: Expressed in At-Most-Quadratic Constraints*

## ACADEMIC EXPERIENCE

- ARCADES Events**, with information at <http://arcades-network.eu/> 27 – 29 March 2019  
**Learning Week III**, INRIA, Sophia Antipolis, France 28 – 31 January 2019  
**Second Software & Industrial Workshop**, Cambridge, UK 3 – 7 September 2018  
**Doctoral School II & ESR Days**, Barcelona, Spain 19 – 23 March 2018  
**Learning Week II**, INRIA, Sophia Antipolis, France 27 November – 1 December 2017  
**First Software & Industrial Workshop**, Athens, Greece 3 – 7 April 2017  
**Learning Week I**, INRIA, Sophia Antipolis, France 28 November – 2 December 2016  
**Doctoral School I**, Oslo, Norway
- BMS/SFB Summer School: Discrete Differential Geometry**, TU Berlin, Berlin, Germany 9 – 20 September 2013  
Lectures by: Prof. V. Bazhanov, D. Cremers, V. Fock, G. Kutyniok, F. Luo, U. Pinkall, W. K. Schief, Y. Suris, S. Tabachnikov, and M. Wardetzky  
with lectures, and information, at <https://www.discretization.de/events/16/>
- Lab Assistant**, Civil Engineering Department, Princeton University June – August 2012  
For **Prof. Michael Littman**, regarding his course “Engineering in the Modern World”  
— Designed a couple of interactive demonstrations of magnetism and telegraphy for first-year students  
— Systematized the restoration of a vintage PDP 8/L computer, including both replacing hardware on its flip-chip modules, and debugging memory reading/writing
- NSF/RTG Summer Program in Analysis and Geometry**, Princeton University 6 – 22 July 2011  
Lectures by: Asst. Prof. G. Holzegel, Prof. E. Stein, L. Pierce, and A. Ionescu  
with (resp.) lectures: “The Geometry of General Relativity”, “A quick introduction to harmonic analysis in  $\mathbb{R}^d$ ”, “Discrete Analogues in Harmonic Analysis”, “Harmonic Analysis and Nonlinear Dispersive Equations”
- Research Assistant**, Physics Department, Princeton University June – August 2011  
For **Prof. Suzanne Staggs**  
— Calculated, with Python, estimate Mueller matrices for an ABS half-wave plate  
— Learned about linear optics, Jones matrices, and Mueller matrices
- Lab Assistant**, Civil Engineering Department, Princeton University June – August 2010  
For **Prof. Michael Littman**, regarding his course “Engineering in the Modern World”  
— Developed six hands-on laboratory demonstrations for his course meant for first-year students  
— Wrote accompanying intuitive descriptions of the Physics-related processes exemplified by the demonstrations  
— Constructed guidelines for use in these laboratory exercises as to show how these processes are involved in radio transmission and reception
- Research Assistant**, Astrophysics Department, Princeton University June – August 2009  
For **Prof. Anatoly Spitkovsky**, Lorenzo Sironi (GS)  
Abstract Title: *Accelerating Particle Acceleration in Shocks*  
— Worked with FORTRAN code to run particle-in-cell simulations of particle acceleration in plasma  
— Coded in IDL in order to analysis and interpret the output data

## UNIVERSITY ACTIVITIES

- Princeton Learning Cooperative**, *Tutor*, Princeton, NJ, U.S.A. October 2011 – January 2012  
— Tutored a local high school student in abstract Algebra, once a week for several months
- Princeton UNIX Users’ Group (PUG)** *President* (2009 – 2011), *Treasurer* (2011 – 2012), Princeton University May 2009 – May 2012  
— Promoted student use of \*nix on campus  
— Managed group’s listserv

**Freshmen Scholars Institute**, *Tutor*, Princeton University

July – August 2011

— Engaged selected incoming freshmen with elementary Number Theory and Probability

— Aided tutees with homework sets, three nights a week for six weeks

## UNIVERSITY ACCOMPLISHMENTS

**Princeton Class of 2012**, *Class Jacket Designer*, Princeton University

12 December 2011

Winner of my class's design competition for its traditional senior-class jacket

Mentioned in the Princeton Alumni Weekly, page 4 (PDF page 6),

<https://mrj.at/files/PAWReunionsGuide2012.pdf>

**Nassau Literature Review**, *Contributor to Winter 2010 issue*, Princeton University

4 December 2010

Selected to have one of my sculptures featured in the [Nassau Literature Review](#)

Electronic copy, see page 70 (PDF page 71), <https://mrj.at/files/NassLit-2010-winter.pdf>

**Princeton Class of 2012**, *Pre-Rade 2009 Shirt Designer*, Princeton University

27 July 2009

Winner of my class's design competition for its t-shirt at the Princeton Pre-Rade, 13 September 2009