

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, \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

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

March 2013 – June 2015

TEACHING EXPERIENCE

FH Technikum Wien, Linear Algebra, Vienna, Austria

— Taught a warm-up course in linear Algebra for students in the Data Science Master's program

October – November 2024

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