

Marcel Padilla | Curriculum Vitae

Technical University of Berlin, Institute for Mathematics, Str. des 17. Juni 136
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Doctoral researcher in Mathematics at the Technical University of Berlin

Academic Position

Caltech, TU Berlin

Doctoral researcher

Pasadena, US & Berlin, Germany

May 2018 – Current

Supervisors: Peter Schröder (Caltech) & Ulrich Pinkall (TU Berlin), Einstein foundation visiting fellowship

Education

TU Berlin

M.S. Mathematics

Supervisor: Ulrich Pinkall

Berlin, Germany

Oct 2016 – May 2018

TU Berlin

B.S. Mathematics

Supervisor: Ulrich Pinkall

Berlin, Germany

Oct 2012 – Jul 2016

Nelson Mandela International School Berlin

Bilingual Abitur

English - German education

Berlin, Germany

Jul 2012

Awards and Association Memberships

Berlin Mathematical School and Math+

PhD student membership

2018 - Current

Einstein Foundation,

PhD scholarship, funded through a Einstein foundation visiting fellowship

2018 - Current

German Academic Scholarship Foundation

Student scholarship, Studienstiftung des Deutschen Volkes, now alumni

2016 - 2018

German Mathematician Union (DMV)

Abitur award, for excellent performances in mathematics

2012

Hans Riegel Foundation alumni

Award, for a mathematical submission as an Abitur exam

2012

Jugend Forscht alumni

Young researchers competition award in Berlin

2011

Publications

- Marcel Padilla, Albert Chern, Felix Knöppel, Ulrich Pinkall, Peter Schröder (2019). *On Bubble Rings and Ink Chandeliers*. ACM Transactions on Graphics, Vol. 38, No. 4, Art. 129
- Marcel Padilla, Benedikt Kolbe, Aniruddha Chakraborty (2017). *The Nearest Hermitian Inverse Eigenvalue Problem Solution with Respect to the 2-Norm*. arXiv:1703.00829
- Heiko Herrmann, Marcel Padilla, and Emiliano Pastorelli (2014). *A.C.T.I.V.E.: A Scalable Superellipsoid-based CFD Visualization for Virtual and Desktop Environments*. EuroVR 2014, The Eurographics Association. 10.2312/eurovr.20141344
- Marcel Padilla (2012). *Eine Neue Visualisierung komplexer Funktionen*. Junge Wissenschaft issue Nr. 94

Conference Presentations

- *On Bubble Rings and Ink Chandeliers*. 8th BMS student conference 2020.
- *On Bubble Rings and Ink Chandeliers*. ACM SIGGRAPH 2019.
- *Simulating Hurricanes on Bunnies, Point Vortex Dynamics on Closed Surfaces*. 7th BMS student conference 2019.
- *A.C.T.I.V.E. A Scalable Superellipsoid-based CFD Visualization for Virtual and Desktop Environments*. EuroVR 2014, The Eurographics Association.

Experiences

Visiting Research.....

Leicester University

Department of Mathematics

Implementing minimal and cmc surfaces. Supervisor: Katrin Leschke

Leicester, United Kingdom

Jan 2019

King Abdullah University of Science and Technology

KAUST internship program

Wood fracture dynamics. Supervisor: Dominik L. Michels

Thuwal, Saudi Arabia

Feb 2018 – Apr 2018

Murdoch University

DAAD rise worldwide scholarship

Machine learning on 4D shape analysis. Supervisor: Hamid Laga

Perth, Australia

Aug 2016 – Oct 2016

Indian Institute of Technology Mandi

DAAD rise worldwide scholarship

Numerical methods for inverse eigenvalue problems. Supervisor: Aniruddha Chakraborty

Mandi, India

Aug 2015 – Oct 2015

Institute of Cybernetics

DAAD rise worldwide scholarship

Tensor field visualization in VR. Supervisor: Heiko Herrmann

Tallinn, Estonia

Jul 2014 – Sep 2014

Research.....

TU Berlin

Student assistant

Discretization in Geometry and Dynamics SFB Transregio 109

Berlin, Germany

Dec 2014 - Sep 2017

Teaching.....

Geometry Processing and Applications <i>Tutorials and several lectures, TU Berlin</i>	Berlin, Germany <i>Winter 2019/2020</i>
Houdini Tutorials Tailored for Mathematicians <i>Online tutorials and course guide, TU Berlin</i>	Berlin, Germany <i>2016 - Current</i>
Mahtematik für Physiker I <i>Tutor classes, TU Berlin</i>	Berlin, Germany <i>Winter 2015/2016</i>
Homework helper <i>Volunteer, Multicultural Youth and Integration Center mji e.V.</i>	Berlin, Germany <i>2012 – 2015</i>

Study Exchange.....

Sophia Univeristy <i>Oversees exchange scholarship from the TU Berlin</i>	Tokyo, Japan <i>Sep 2017 – Feb 2018</i>
Durham Univeristy <i>Erasmus exchange scholarship from the EU</i>	Durham, United Kingdom <i>Sep 2013 – Jul 2014</i>

Technical and Personal Skills

Languages.....

English: *excellent command*
German: *native*
Spanish: *native*
French: *Intermediate*
Japanese: *beginner*
Arabic: *beginner*

Programing Languages and Software.....

Main computation tools: *Python, Houdini VEX, MATLAB*
Visualization tools: *Houdini FX, MATLAB*
Experienced: *Java, C++*

Volunteering.....

Arbeiter-Samariter-Bund <i>Kitchen staff, refugee emergency housing (Rathaus Wilmersdorf)</i>	Berlin, Germany <i>2015 – 2017</i>
St. John Ambulance Society <i>First aid response team</i>	Durham, UK <i>2013 – 2014</i>
Multicultural Youth and Integration Center mji e.V. <i>Volunteer, Homework helper</i>	Berlin, Germany <i>2012 – 2015</i>

Dance.....

Argentine Tango
Weekly *2015 – Current*