

# Diego Renner

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</> C++, Python, Matlab

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## EXPERIENCE

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- **ETH Zürich** Zurich, Switzerland  
*Research Assistant* September 2020 - Now
  - Hired for continued development of BEM code that was implemented in the Masters Thesis.**Technologies:** C++, CMake, Github  
**Theory:** BEM, Resonances in Transmission Scattering Problems
- **ETH Zürich** Zurich, Switzerland  
*Teaching Assistant* September 2020 - Now
  - Teaching Assistant for Lecture "Computational Methods for Engineering Applications".**Technologies:** C++,  $\text{\LaTeX}$   
**Theory:** ODEs, PDEs and numerical algorithms to solve them
- **CSCS Swiss National Supercomputing Center** Lugano, Switzerland  
*Internship* May 2018 - August 2018
  - Writing regression checks for Piz Daint, Cray XC40/XC50 production system.**Technologies:** C, MPI, MySQL, Kibana, Grafana
- **Coople** Basel/Zurich, Switzerland  
*Logistics & Service* 2013 - 2020
  - 50+ employments at events and meetings.
  - Favoured by 8 employers on the jobs distribution platform Coople due to reliability and efficiency.
- **Eugen Leu & Partner AG, Photography Studio** Riehen, Switzerland  
*Internship* September 2011 - October 2011
  - Preparing photosets and learning professional workflows.

## EDUCATION

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- **ETH Zürich** Zurich, Switzerland  
*M.Sc. Computational Science and Engineering, Specialization Physics* 2018-2020
  - Degree finished, staying enrolled to take courses from Maths Masters degree.
- **Universität Basel** Basel, Switzerland  
*B.Sc. Computational Mathematics* 2014-2018
  - Completed extracurricular courses on Computer Architecture, Operating Systems and Quantum Mechanics.
- **Gymnasium Bäumlhof** Basel, Switzerland  
*Matura, Specialization Biology & Chemistry* 2009-2014

- **CSCS Swiss National Supercomputing Center / USI Lugano**

(remote) Lugano, Switzerland

*Summer School*

2020

- GPU: architecture & programming (CUDA, OpenACC)
- JupyterLab
- Python: Numpy, SciPy, Dask, Numba
- ML: Rapids
- Deep Learning: TensorFlow

- **International Consulting Network (ICON)**

Shanghai, (remote) Belo Horizonte

*Student Consulting Network*

2017 - 2018

- Market Research & Trend Analysis
- Consulting for CREP (Real Estate, China) & Lalubema (Private Security, Brazil)

*Following sections items are clickable*

## PROJECTS & THESIS

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- Parallelizing the Barnes-Hut Algorithm with MPI: Parallelized implementation of N-Body solver in C++ using the MPI framework.
- AiiDA Lab implementation of IR spectrum calculations for carbon based nanomaterials: An AiiDa workflow implemented in the Jupyter Notebooks based AiiDa lab interface. (Semester Thesis)
- Near Resonances for Scattering Transmission Problems: A BEM based C++ solver for Scattering Transmission Problems, developed to investigate scatterer-dependent near resonances. (Masters Thesis)