David Aarón Velasco Romero

PERSONAL INFORMATION

- Nationality: Mexican
- Birth date: May 2nd, 1987
- Birth place: Guadalajara, Jalisco, México.
- Mail: david.velasco@princeton.edu
- Telephone number (cell phone): +1 609 255 4871
- Orcid: `https://orcid.org/0000-0002-6093-891X`

EMPLOYMENT

Postdoctoral Researcher, *Department of Astrophysical Sciences, Princeton University* *2022-present*
- *Supervision of Bachelor Students: Sajia Shahrin Neha, Xander Jenkin*

Postdoctoral Researcher, *Institute for Computational Science, University of Zurich* *2019-2022*
- *Organizer of the Computational Sciences seminar*
- *Lecturer in the High Performance Computing course at UZH (Spring of 2020/2021)*
- *CSCS Production Project: Three-dimensional study of multi-fluid dust dynamics inprotoplanetary disks with embedded low-mass planets. Granted 350,000 node hours at the GPU partition of Piz-Daint as the Principal researcher (PI)*

EDUCATION

PhD in Computational Modelling and Scientific Computing
UAEM, Cuernavaca Morelos, México *2015-2019*

Thesis (Honorable mention): Development of various numerical methods over GPUs and their application to astrophysical environments.

Grants:
- *Swiss Government Excellence Scholarship: 1 year fellowship at the University of Zurich*
- *CSCS Preparatory Project: Discontinuous Galerkin methods on GPUs for planetary formation*

Master in Science (Physics)
Instituto de Ciencias Físicas UNAM, Cuernavaca Morelos, México *2011-2014*
Grade: 8.8/10
Thesis: Analysis of the behavior and robustness of an infotactic searcher against uncertainty in the parameters of the signal.

BSc in Physics
Universidad de Guadalajara, CUCEI *2006-2010*
Grade: 94.86/100

RESEARCH AREAS OF INTEREST

- *Computational Fluid Dynamics.*
- *Computational Astrophysics.*
- *High Performance Computing.*
- *Parallel and GPU programming.*
- *High-order methods*

CONFERENCES

1. *Summer School*
   Parallel Computing and GPU's, Instituo de Ciencias Físicas, UNAM. Cuernavaca, Morelos *2014*
2. *Workshop*
   Accelerated High-Performance Computing in Computational Sciences, International Center for Theoretical Physhics, Trieste *2015*
3. *Workshop*
   Introduction to Programming Pascal (P100) with CUDA 8, CSCS, Lugano *2017*
4. *Conference*
   Carving through the Codes: Challenges in Computational Astrophysics, Davos *2017*
5. *Conference*
   PASC17, CSCS, Lugano *2017*
6. *Workshop*
   Numerical Simulations of Planet-Disc Interactions, Cuernavaca, Morelos *2017*
7. *Workshop*
   RUM (RAMSES User Meeting) 2019, Copenhagen, *2019*
8. *Workshop*
   Multi GPU Training with TensorFlow on Piz Daint, Online, *2020*
9. *Conference*
   Circumplanetary Disks and Satellite Formation, Online *2021*

PROGRAMING SKILLS

Proficient: C, C++, Fortran, Python, CUDA, MPI
Working experience: Assembly

LANGUAGES

- *English: Proficient.*
- *Spanish: Native language.*

PROFESSIONAL REFERENCES

- *Dr. Frédéric Sylvain Masset; masset@icf.unam.mx*
- *Dr. Hernán Larralde Ridaura; hernan@icf.unam.mx*
- *Dr. Romain Teyssier; teyssier@princeton.edu*