

Dr. Alice-Agnes Gabriel wins 2020 PRACE Ada Lovelace Award for HPC

PRACE is delighted to announce that Dr. Alice-Agnes Gabriel, [Department of Earth and Environmental Sciences Geophysics](#), Ludwig-Maximilians-University of Munich (LMU) is the winner of the 2020 PRACE Ada Lovelace Award for HPC for her outstanding contributions to and impact on HPC in Europe. The award will be presented to her at the [EuroHPC Summit Week 2020 / PRACEdays20](#), 26 March, Porto, Portugal. Dr. Gabriel will give a talk during the plenary session on Wednesday 25 March, and will participate at the PRACEdays Panel Discussion: "Will HPC, AI and Data Science be the same in 10 years' time?" on Thursday 26 March.



Dr. Alice-Agnes Gabriel, is a lecturer in Professor Heiner Igel's Chair of Seismology in the Institute of Geophysics, LMU. Her research is focusing on understanding the physics of earthquakes using theoretical analysis, physics-based forward models, innovative observation techniques and High-Performance Computing to bridge spatio-temporal scales.

Dr. Gabriel's career is characterized by first-rate earthquake scenarios realised on some of the largest supercomputers worldwide. Her research work was nominated and awarded by several prizes such as one of the Finalist by Association for Computing Machinery (ACM) [Gordon Bell Prize in 2014](#), at International Conference for High Performance Computing, Networking, Storage, and Analysis (SC14), New Orleans, USA; and [Best Paper Award](#), IEEE/ACM International Conference for High Performance Computing, Networking, Storage, and Analysis (SC17), Denver, USA. Likewise she was awarded the [PRACE ISC Award](#) at the International Supercomputing Conference ISC 14, Leipzig, Germany

She contributes to two European Horizon 2020 projects, an Exascale Hyperbolic PDE Engine [ExaHyPE](#) (ended October 2019) and Center of Excellence In Solid Earth [ChEESA](#), where the latter is a Centre of Excellence intended to bring together leading European researchers in Solid Earth research at the Barcelona Supercomputing Center for Exascale supercomputing. She is involved in two [collaborative projects](#) with the King Abdullah University of Science and Technology (KAUST) and two projects funded by the German Research Foundation – one of the two projects is Community Software for Reproducible Computational Seismology [CoCoReCS](#) resulted from an interdisciplinary call to support sustainable research software called [SeisSol](#). On top of all this her project "[TEAR – Truly Extended Earthquake Rupture](#)" was awarded an ERC Starting Grant in 2019.

"Dr. Alice-Agnes Gabriel uses numerical simulations coupled to experimental observations to increase our understanding of the underlying physics of earthquakes. The work includes wide scales and can improve our knowledge and safety against these natural phenomena." says Núria López, Chair of the PRACE Scientific Steering Committee.

For her outstanding research work, she is highly recognised in the geoscience community and invited as keynote speaker at European and international conferences such as [PASC Conference 2018](#), likewise she is a presenter in several workshops and colloquia.

She has a strong commitment as a teacher. By using social media (@InSeismoland) she can engage and inform a wider public about her research work.

Overall, Dr. Gabriel serves as a special role model for STEM scientists and beyond.

Further articles about Dr Alice-Agnes Gabriels' research:



- www.gauss-centre.eu/news/research-highlights/article/researchers-uncover-critical-role-of-direct-earthquake-motions-in-triggering-a-surprise-tsunami/
- www.en.uni-muenchen.de/news/newsarchiv/2019/gabriel_erdbeben.html
- www.gauss-centre.eu/news/research-highlights/article/researchers-create-largest-longest-multiphysics-earthquake-simulation-to-date/
- www.gauss-centre.eu/news/newsflashes/article/lmu-tum-research-team-wins-best-paper-award-at-sc17/
- www.en.uni-muenchen.de/news/press-services/press-releases/2014/pelties_seisol.html

About PRACE

The Partnership for Advanced Computing in Europe (PRACE) is an international non-profit association with its seat in Brussels. The PRACE Research Infrastructure provides a persistent world-class High-Performance Computing service for scientists and researchers from academia and industry in Europe. The computer systems and their operations accessible through PRACE are provided by five PRACE members (BSC representing Spain, CINECA representing Italy, ETH Zurich/CSCS representing Switzerland, GCS representing Germany and GENCI representing France). The Implementation Phase of PRACE receives funding from the EU's Horizon 2020 Research and Innovation Programme (2014-2020) under grant agreement 823767. For more information, see www.prace-ri.eu

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