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Oberwolfach Seminar

Time Parallel Time Integration

Organizers: Stephanie Friedhoff, Wuppertal
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Date (ID):   23 – 28 November 2025 (2548b)
Deadline: 15 September 2025

Time parallel time integration is a new area of research to solve large scale evolution problems in parallel. When solving such time dependent problems, the time direction is usually not used for parallelization, because the time evolution is perceived as being an entirely sequential process, numerically treated with time stepping methods. When parallelization in space however saturates, the time direction offers itself as a further direction for parallelization. The time direction is however special, because of the causality principle obeyed by time dependent problems: the solution later in time is determined by the solution earlier in time, and not the other way round. Algorithms trying to use the time direction for parallelization must therefore be special, and take this very different property of the time dimension into account. This Oberwolfach Seminar is a first to offer a complete and accessible mathematical introduction to how one can overcome this causality principle and design algorithms which integrate time dependent problems parallel in time.

www.mfo.de/occasion/2548b

The seminar takes place at the Mathematisches Forschungsinstitut Oberwolfach. The Institute covers board and lodging. By the support of the Carl Friedrich von Siemens Foundation travel expenses can be reimbursed up to 150 EUR in average per person (against copies of travel receipts). The number of participants is restricted to 24.

Applications including title, ID and date of the intended seminar, together with **one pdf-file attached** containing

- full name and university/institute address, incl. e-mail address
- short CV and publication list
- present position, university
- name of supervisor of Ph.D. thesis
- a short summary of previous work and interest

should be **sent by e-mail** via **seminars@mfo.de** until 15 September 2025 to:

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