

Dear All,

This is Kaname Matsue, a Professor in IMI, Kyushu Univ.

We will hold a special colloquium on May 9 in honor of Professor Ingenuin Gasser from the University of Hamburg, Germany, who will be visiting Japan.  
We apologize for very late announcement.

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IMI extraordinary Colloquium; May 2025

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Prof. Ingenuin Gasser (Faculty of Mathematics, Informatics and Natural Science, University of Hamburg, Germany) will visit Japan and give a lecture in Colloquium.  
This is an important opportunity to share research activities of applied mathematics in Europe.  
We look forward to your participation.

■Date : May 9 (Fri), 2025 15:00 - 16:00

■Venue : IMI Auditorium / Zoom online

■Speaker : Prof. Ingenuin Gasser (Faculty of Mathematics, Informatics and Natural Science / Department of Mathematics, University of Hamburg, Germany)  
<https://www.math.uni-hamburg.de/en/forschung/bereiche/am/modellierung/personen/gasser-ingenuin.html>

■Title : Modelling, simulation and optimisation of power plants based on renewable energies

■Abstract :

The presentation refers to the mathematical modelling of power plants based on renewable resources ranging from established applications such as parabolic trough power plants to osmotic pressure driven energy conversion technologies. The complexity of such applications requires a substantial mathematical modelling effort to finally end up with reasonable models, which can be simulated fast and robust and which allow optimisation approaches. All applications involve fluid dynamic or thermo-fluid dynamic models which have to be significantly reduced under the restriction of keeping the most relevant chemical and physical effects. Mathematically these models are nonlinear systems of PDE's of mixed elliptic-hyperbolic type.  
In view of the underlying application we discuss which quantities are reasonable to be optimized, e.g. the power output of the power plant with respect to operational or system parameters.

Background :

A Memorandum of Understanding (MOU) between IMI, Kyushu Univ. and the University of Hamburg was signed in FY2020, and projects such as student and research exchange (online lectures provided by the University of Hamburg) are being implemented between the two universities.

Prof. Gasser visited IMI in FY 2019 and has been working hard on this project.

As this agreement is scheduled to expire in 2025, Prof. Gasser will visit IMI to discuss the continuation of the agreement, including student exchange between the University of Hamburg and the Graduate Schools of Math. And JGMI.

Prof. Gasser is scheduled to stay in Kyushu from May 8 to May 15, followed by a stay at Kyoto University from May 16 to 19.

(Zoom URL)

Topic: IMI extraordinary Colloquium; May 2025

<https://us06web.zoom.us/j/83117547192?pwd=R8ZNSkTTEaXYxpbxC6A3R1TDsGGeIh.1>

Meeting ID: 831 1754 7192

Pass: 202448

- Please understand that students should indicate their student number (surname) (e.g. 1SC○○○○○A (surname)) and others should indicate their full name.
  - Please understand the host will mute the audience's sound and camera.
  - When you have a question, please use the "Raise hand function" or the "Chat function".
- Then, the host will unmute.

Important Notice:

Please register the following MS FORM if you are planning to participate in, which will contribute the activities in IMI.

(Registration FORM of IMI extraordinary Colloquium; May 2025)

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<https://forms.office.com/r/kLzr0jWuRs>

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If you have any questions, please ask the extra organizer KM (and Prof. Tagami).

IMI Colloquium Organizers

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