



Dear Colleagues!

V. Kupradze Institute of Mathematics of the University of Georgia is pleased to invite you to the Online Tbilisi Analysis & PDE Seminar. The seminar is held bi-weekly on Tuesdays at 20 : 00 local time in Tbilisi.

Talk on April 29, 2025

Speaker: Prof. **Malte Braack**, the Christian Albrecht University of Kiel, Germany.
<https://www.math.uni-kiel.de/angewandte-mathematik/de/malte-braack>

"The concept of mapped coercivity for nonlinear operators in Banach spaces"

Abstract: We provide a concise proof of existence of the solutions to nonlinear operator equations in separable Banach spaces, without assuming the operator to be monotone. Instead, our main hypotheses consist of a continuity assumption and a mapped coercivity property, which is a generalization of the usual coercivity property for nonlinear operators. In the case of linear operators, we recover the traditional inf-sup condition.

To illustrate the applicability of this general concept, we apply it to semi-linear elliptic problems and the Navier-Stokes equations.

The talk is based on a joint work with R. Becker (University de Papu et de l'Adour).

Date: April 29, 2025

Time: 20 : 00 local time in Tbilisi;

(Compare to your local time: <https://www.timeanddate.com/worldclock/georgia/tbilisi>);

How to join:

The seminar is organized on the **Zoom Platform**. If you are already registered, you do not need to register again. Otherwise, to join the seminar please send an e-mail to seminarim@ug.edu.ge or register here:

<https://forms.gle/xfQJ9fg1uqe7CrZw6>

You will then receive further information.

WEB of Seminar: <https://www.ug.edu.ge/en/tbilisi-analysis-and-pde-seminars>

Organizers:

1. R. Duduchava, Institute of Mathematics, University of Georgia, Tbilisi
2. E. Shargorodsky, Department of Mathematics, King's College London
3. G. Tephnadze, Institute of Mathematics, University of Georgia, Tbilisi

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