

Weierstraß-Institut
für Angewandte Analysis und Stochastik
Leibniz-Institut im Forschungsverbund Berlin e.V.
Mohrenstraße 39 10117 Berlin



Berliner Oberseminar

Nichtlineare partielle Differentialgleichungen (Langenbach-Seminar)

Priv.-Doz. Dr. A. Glitzky (WIAS)
Prof. Dr. A. Mielke (WIAS, HUB)
Prof. Dr. B. Zwicknagl (HUB)

Invitation to the lecture series



given by

Prof. Dr. Boris Zaltzman
(University of the Negev, Israel)

Title:

Mass and charge transfer through selective media

In this series of talks I am going to address the physical and mathematical modeling of the physical and electrochemical phenomena related to the transfer through inert and charge selective solids (nanofiltration/reverse osmosis polymer membranes; charge-selective electro-dialysis membranes and nano-channels; metal electrodes). I will mostly focus on the hydrodynamic aspects of this process, including the hydrodynamic instability of the one-dimensional conduction state and will present the results of our recent experimental and theoretical studies.

Dates and topics:

- 22.4.2020 Artifact of “Breakthrough” osmosis or what may be wrong with local Spiegler–Kedem–Katchalsky equations with constant coefficients
- 29.4.2020 Orientation effects in hydrodynamic instability in concentration polarization
- 6.5.2020 Equilibrium electro-convective instability in electrodeposition with Butler–Volmer kinetics

The full abstracts of the three talks are available on the seminar website. All talks are planned to start 3.15 p.m. Since due to Corona protection real life lectures unfortunately are impossible, the lectures will take place over 'Zoom'. The Zoom link will appear on the seminar website each week, about 15 minutes before the start of the talk.

Support: Boris Zaltzman's visit is supported by MATH+ and WIAS.

<http://www.wias-berlin.de/research/rgs/fg1/langenb/seminar.jsp>
A. Glitzky, glitzky@wias-berlin.de, 17. April 2020