ALPEN-ADRIA UNIVERSITÄT KLAGENFURT

INVITATION TO THE DOCTORAL SEMINAR

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"Minimization based formulations of the EIT problem with the complete electrode model"

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Abstract

One of the recent approaches to solving inverse problems is to use the all-at-once formulation where both the state and the parameter are considered as unknowns. The advantage of this method is to avoid using the parameter-to-state map, which is usually difficult to determine in real problems and sometimes leads to strictly restrictive conditions. In this talk, we regularize the electrical impedance tomography (EIT) problem with the complete electrode model (CEM) in the plane. The regularization method is to formulate our problem as a minimization problem, which is a generalization of the all-at-once formulation. The new one is to use CEM, a widely used practical model. Additionally, we also discuss implementing using Matlab. Key words. inverse problems, regularization, minimization based formulations, EIT problem, complete electrode model, all-at-once formulation.

Barbara Kaltenbacher and the Department of Mathematics look forward to seeing you at the talk!