Department of Numerical Analysis and Scientific Computing

Simula Research Laboratory

Oslo, Norway

Optimization in Oslo
A Seminar Series on Continuous Optimization

Date:
Tuesday April 25, 2023 at 15:00 (GMT+2, CET)

Speaker:
Prof. Dr. Alfio Borzi
Julius-Maximilians-Universität Würzburg

Title:
Quantum models and optimal control problems

Abstract:
The control of quantum states in physical systems has a host of
challenging and foreseen applications in nano-sciences, which is
boosting investigation in the modelling and numerical solution
of quantum control problems.

The purpose of this talk is to illustrate optimal control problems arising
in quantum optics, dipole transition, dissipative systems, transport of
Bose--Einstein condensates, density functional theory, and
in the statistical Wigner framework. The focus is on the formulation
of these problems, while theoretical and numerical issues and many
open problems are left for discussion during or after the talk.

Brief Bio:
Alfio Borzi', born 1965 in Catania (Italy), is Professor and Chair of Scientific
Computing at the Institute for Mathematics of the University of Wurzburg,
Germany. He studied Mathematics and Physics in Catania and Trieste where
he received his PhD in Mathematics
from Scuola Internazionale Superiore di Studi Avanzati (SISSA).

He served as Research Officer at the University of Oxford (UK) and as
Assistant Professor at the University of Graz (Austria) where he completed
his Habilitation and was appointed as Associate Professor. Since 2011

he has been Professor of Scientific Computing at the University of Wurzburg.

The main topics of his research and teaching activities are modelling and numerical analysis, optimal control, optimisation, and scientific computing.

For more info see:

https://www.mathematik.uni-wuerzburg.de/fileadmin/10040900/2022/cvAlfioBorzi2022.pdf