Descriptor 2019

at

Hotel
Nachtigall

March 17 – 20, 2019

Monday, March 18

8:30 - 10:30   Opening

                      Altmann, Robert (30 min)
                      PDAE formulation of parabolic problems with dynamic boundary conditions

                      Groh, Dennis (20 min)
                      Approximation of an Elliptic PDAE - Deriving Error Estimates

                      Tischendorf, Caren (30 min)
                      Numerical Analysis of PDAEs

10:30 - 11:00   Coffee Break

11:00 - 12:30   Gosea, Ion Victor (30 min)
                      Data-driven model reduction of systems with polynomial nonlinearity

                      Hanke, Michael (30 min)
                      Least-squares collocation for DAEs

                      Jahnke, Jonathan (20 min)
                      Particle Dynamics

12:30 - 14:00   Lunch Break

14:00 - 15:15   Cortes Garcia, Idoia (20 min)
                      DAE Index of refined models and circuits

                      Paschkowski, Manuela (20 min)
                      Orbital convergence of timestepping schemes for non-smooth mechanical systems

                      Winkler, Henrik (20 min)
                      Perturbations of linear relations

15:15 - 16:00   Coffee Break

16:00 - 17:00   Gernandt, Hannes (20 min)
                      One-dimensional perturbations of singular matrix pencils

                      Trunk, Carsten (30 min)
                      The gap distance to the set of singular matrix pencils

18:00   Dinner

Tuesday, March 19

8:30 - 10:30 Lamour, René (30 min)
New Insights of the Robotic Arm Problem

Plunder, Steffen (20 min)
Lagrangian perspective on skeletal muscle models

Wieloch, Victoria (20 min)
Lie group time integration for constrained mechanical systems

Steinebach, Gerd (20 min)
Fluid flow network simulation

10:30 - 11:00 Coffee Break

11:00 - 12:30 Gerdts, Matthias (30 min)
Convergence of higher index DAE optimal control problems

Hachtel, Christoph (20 min)
Convergence of Multirate Implicit Euler Method for Semi-Explicit DAEs of Index-1

Haller, Frédéric (20 min)
Optimal Control

12:30 - 14:00 Lunch Break

14:00 - 15:00 Heiland, Jan (20 min)
Robust Control for Incompressible Fluid Flow

Owis, Ashraf (30 min)
Nonlinear feedback optimal control

15:00 - 15:30 Coffee Break

15:30 - 16:30 Berger, Thomas (30 min)
Observers for nonlinear DAEs

Günther, Michael (30 min)
Multirate Schemes - still a princess to be kissed awake

18:00 Dinner

Wednesday, March 20

9:00 - 10:30   Banagaaya, Nicodemus (30 min)
Decoupling of nonlinear DAEs arising from Gas Transport Networks

Estévez Schwarz, Diana (20 min)
A Projector Based Decoupling of DAEs obtained from the Derivative Array

März, Roswitha (30 min)
Several basic characteristics of differential-algebraic operators

10:30 - 11:00   Coffee Break

11:00 - 12:00   Mehrmann, Volker (30 min)
Port Hamiltonian differential -algebraic equations

Hauschild, Sarah-Alexa (20 min)
Model reduction for port-Hamiltonian differential-algebraic equations