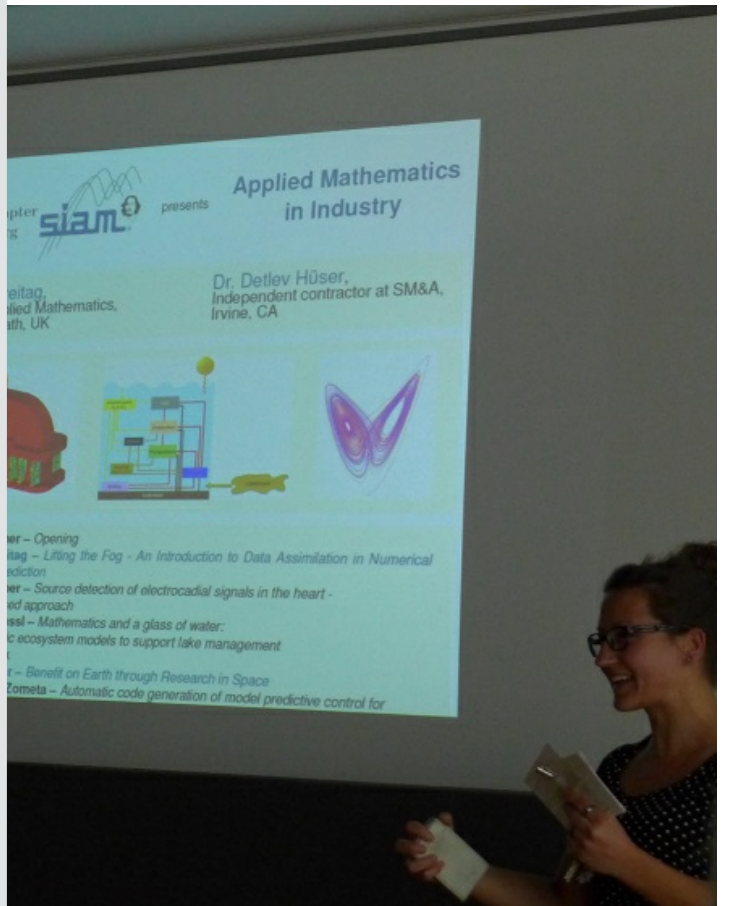


STUDENT CHAPTER OF SIAM MAGDEBURG

"I Mathematics in Industry"





Weather forecast for today

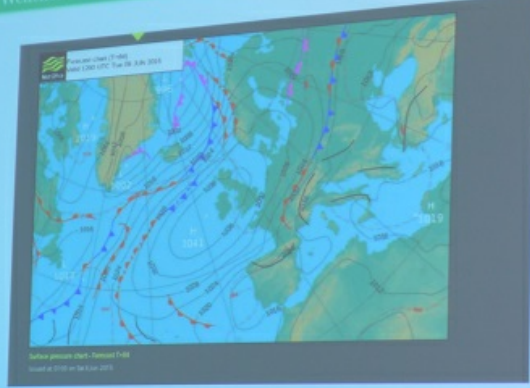


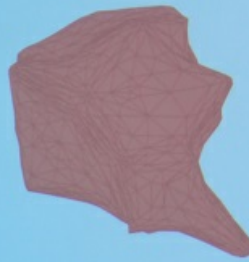
Figure: UK MetOffice

Fit of delay function
Shortest distance in graph
Compare results

Measurement error

Motivation, The heart chamber

- Cardiac tissue
- Rhythmic heart beat
- Cardiac excitation





Mathematics and a glass of water:
Using aquatic ecosystem models to support lake management

Marieke Frazal et al.



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Benefit on Earth through Research in Space
Magdeburg, June 9th, 2015

Dr. Delfav Huisson

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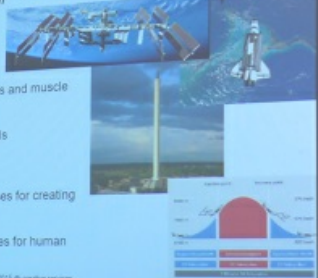
Motivation for Research in Microgravity

Microgravity is a unique property of orbiting space vehicles being in a free fall condition

- No sedimentation
- No convection
- Body fluid distribution, Bone loss and muscle atrophy
- Activities of gravity sensitive cells

Benefit on Earth

- Learn mechanisms and processes for creating new materials
- Development of countermeasures for human physiology and health care



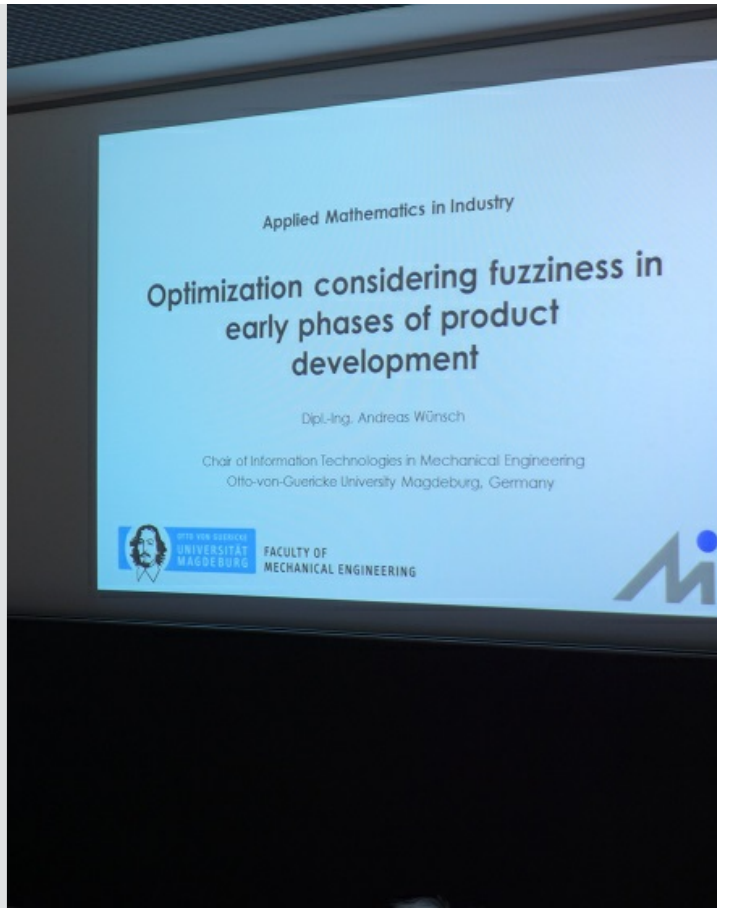
Control: basic principle



1. Obtain state
2. Predict and optimize
3. Apply "optimal" input

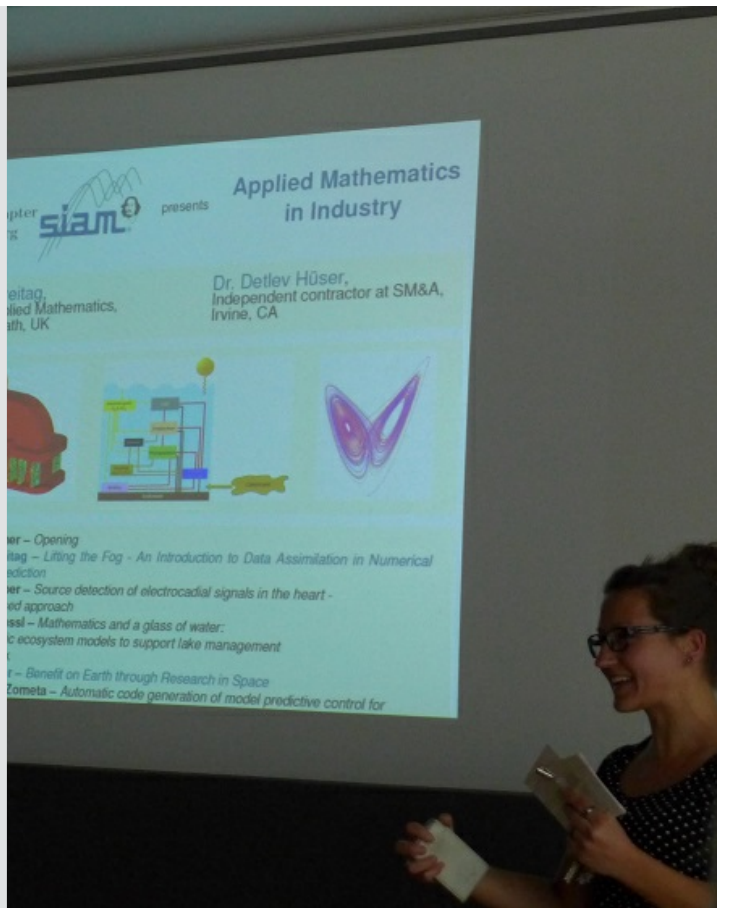
repeated prediction/optimization
simple
computationally expensive
challenging







orwärts



vorwärts




vorwärts

Fit of delay function
Shortest distance in graph
Compare results

Motivation, The heart chamber

- Cardiac tissue
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- Cardiac excitation



Weber Institut für Mathematische Optimierung June 9, 20

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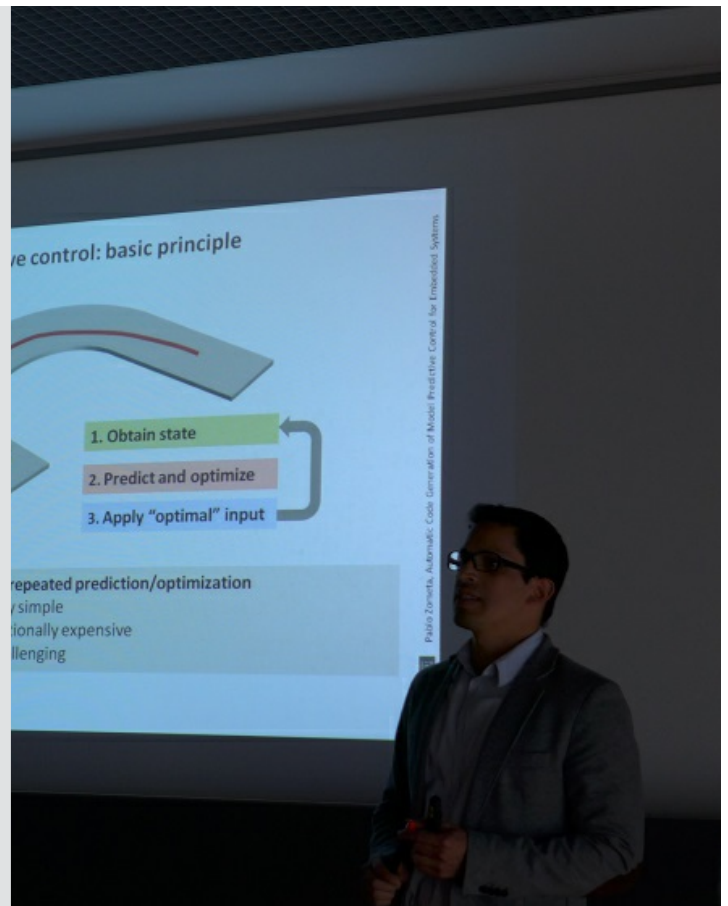
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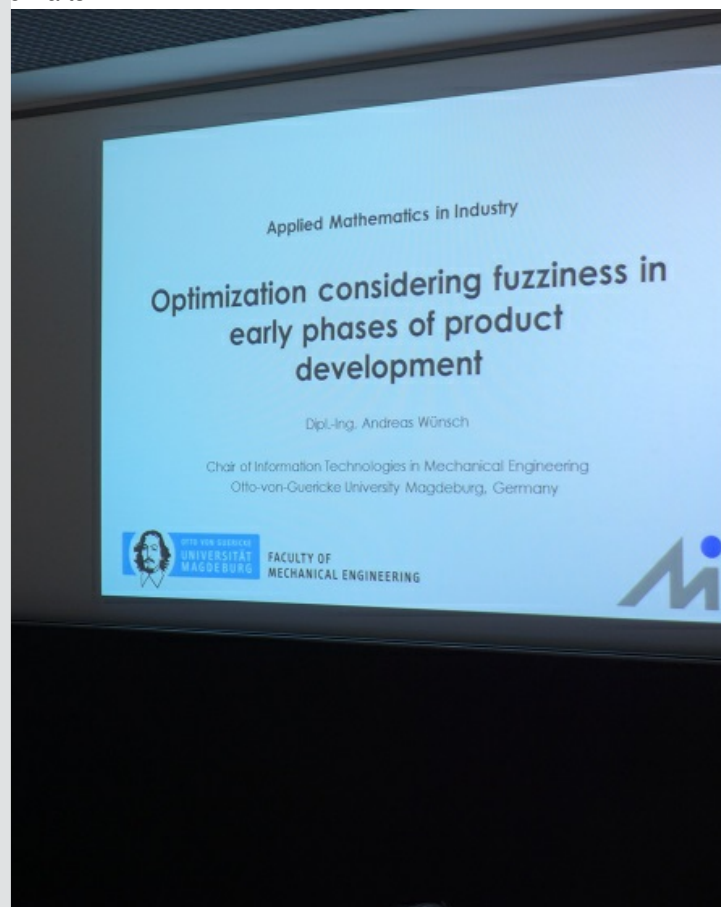
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summer workshop on **9th of June**. It focuses on the applications of
nalyze real world applications. The workshop will start at **1 p.m.** at the

Prigogine V0.05.2+3

and two guest speakers:

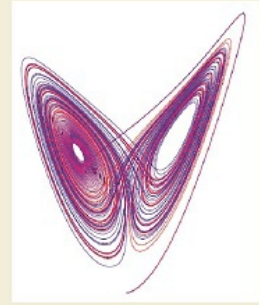
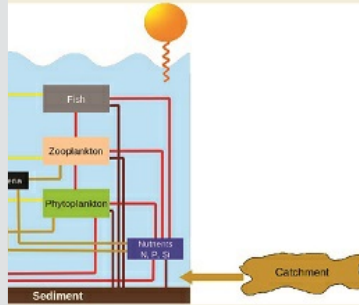
University of Bath, UK) and

CA, and Owner of dh creative services, Syke, Germany).

ments. The program including abstracts can be found below. If you
"Orante Da Nino Dolce Vita" please let us now > siamchapter@ovgu.de

presents **Applied Mathematics
in Industry**

Dr. Detlev Hüser,
Independent contractor at SM&A,
Irvine, CA



- *An Introduction to Data Assimilation in Numerical
of electrocardial signals in the heart -*

*d a glass of water:
o support lake management*

*rough Research in Space
ode generation of model predictive control for*

considering fuzziness in early phases of product

09, 2015

inar room Prigogine V0.05.2+3
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heart - A graph based approach

ic ecosystem models to support lake

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