

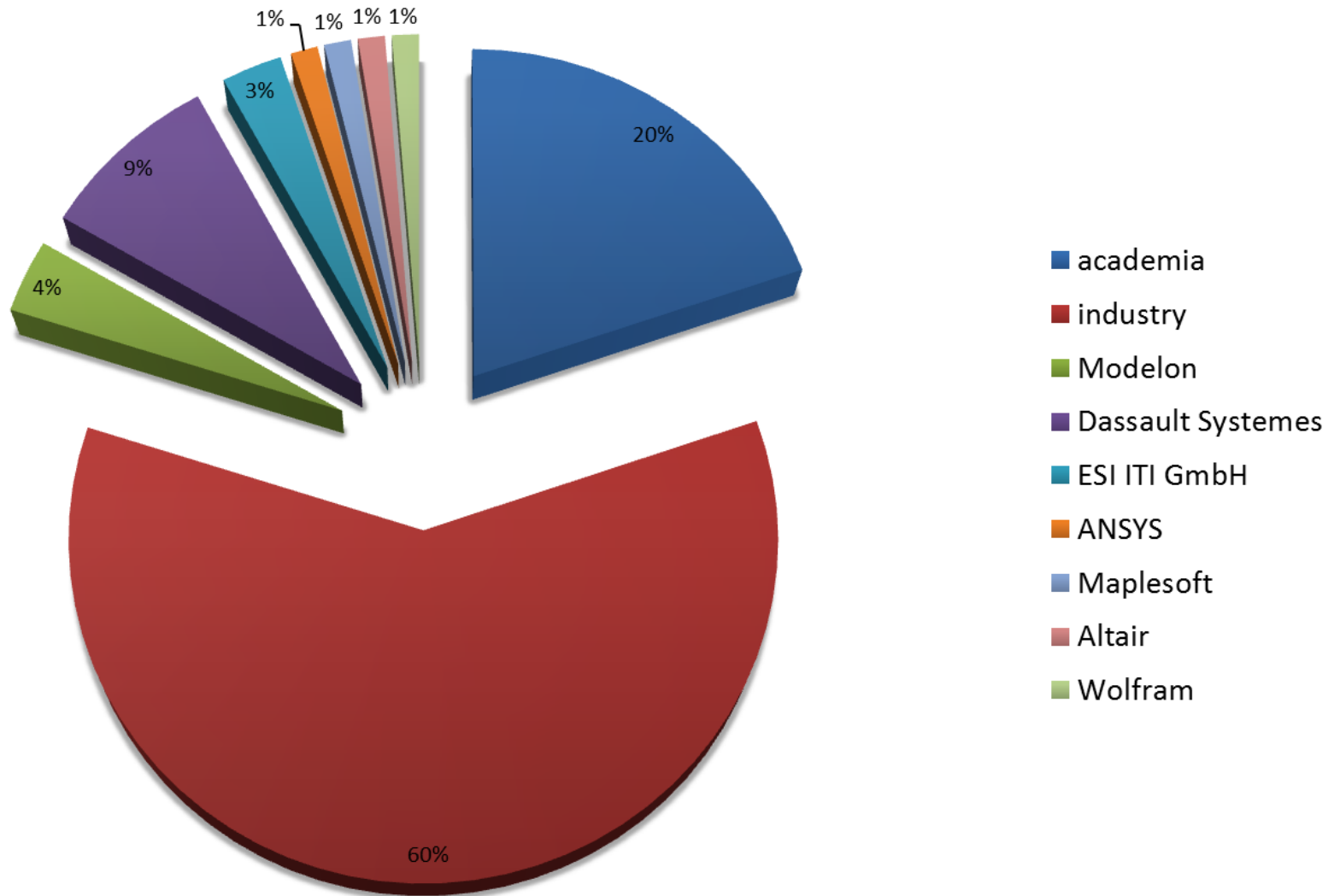


Rückblick auf die Modelica Conference 2017

Übersicht

- 15.05.2017 – 17.05.2017 in Prag
- Gastgeber: Doc. MUDr. Jiří Kofránek, Karls-Universität
- 313 Teilnehmer (2015: 413, 2014: 399, 2011: 380)
- 129 eingereichte Veröffentlichungen, 83 als Vortrag, 19 Poster
- 9 Vendor Sessions
- 10 Tutorien
- 2 zweite Library Awards: <https://github.com/AHaumer/EMOTH> und HVACAgentBasedControl (Teil von <https://github.com/RWTH-EBC/AixLib>)
- Fotoalben: <http://modelica.cz/modelica-2017-photos>
- Zukünftig: eine europäische = internationale Modelica Conference alle 2 Jahre, dazwischen außereuropäisch

Teilnehmer



Neue Sessions

Acoustic & Medical Systems Chair: Marek Mateják

Integrative physiology in Modelica

Jiří Kofránek, Tomáš Kulhánek,
Marek Mateják, Filip Ježek
and Jan Šilar

Sound Source Extension Library for Modelica

Johann Ernhofer,
Raimund Zitzenbacher
and Christoph Reichl

Towards Medical Cyber-Physical Systems: Modelica and FMI based Online Parameter Identification of the Cardiovascular System

Jonas Gesenhues, Marc Hein,
Maike Ketelhut, Thivaharan Albin
and Dirk Abel

Wind & Naval Engineering Chair: Michael Sielemann

The DLR RailwayDynamics Library: the Crosswind Stability Problem

Andreas Heckmann
and Gustav Grether

The OneWind Modelica Library for Floating Offshore Wind Turbine Simulations with Flexible Structures

Mareike Leimeister
and Philipp Thomas

Modelica Based Naval Architecture Library for Small Autonomous Boat Design

Thom Trentelman,
Joshua Sutherland, Kazuya Oizumi
and Kazuhiro Aoyama

HVAC Systems Chair: Stefan Wischhusen

Cabin Thermal Needs: Modeling and Assumption Analysis

Florent Breque
and Maroun Nemer

Simulative Comparison of Mobile Air-Conditioning Concepts for Mechanical and Electrical Driven Systems

Arnim von Manstein,
Dirk Limperich
and Shivakumar Banakar

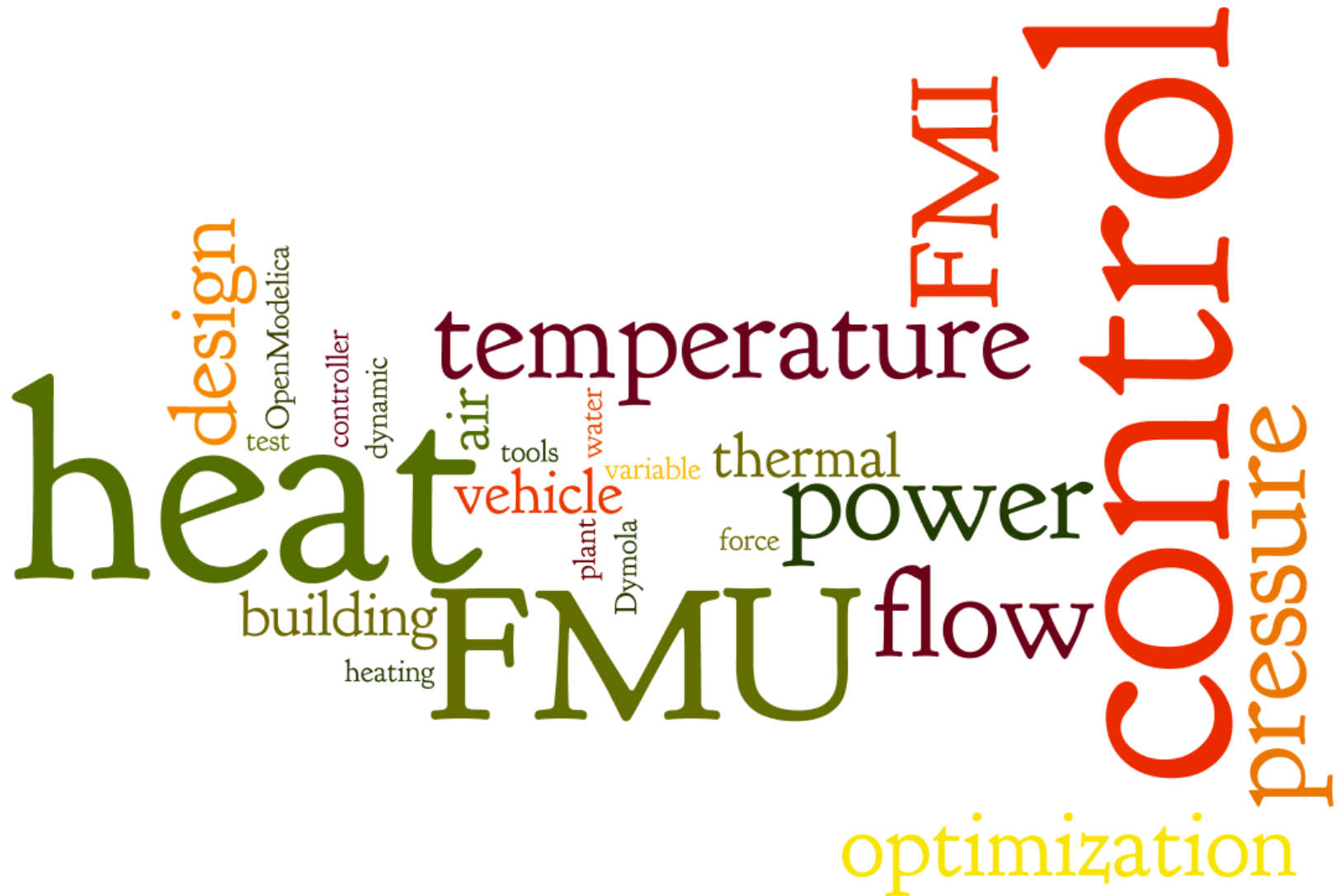
Duty Cycle for Low Energy Operation of a Personal Conditioning Device

Rohit Dhumane, Jiazhen Ling,
Vikrant Aute
and Reinhard Radermacher

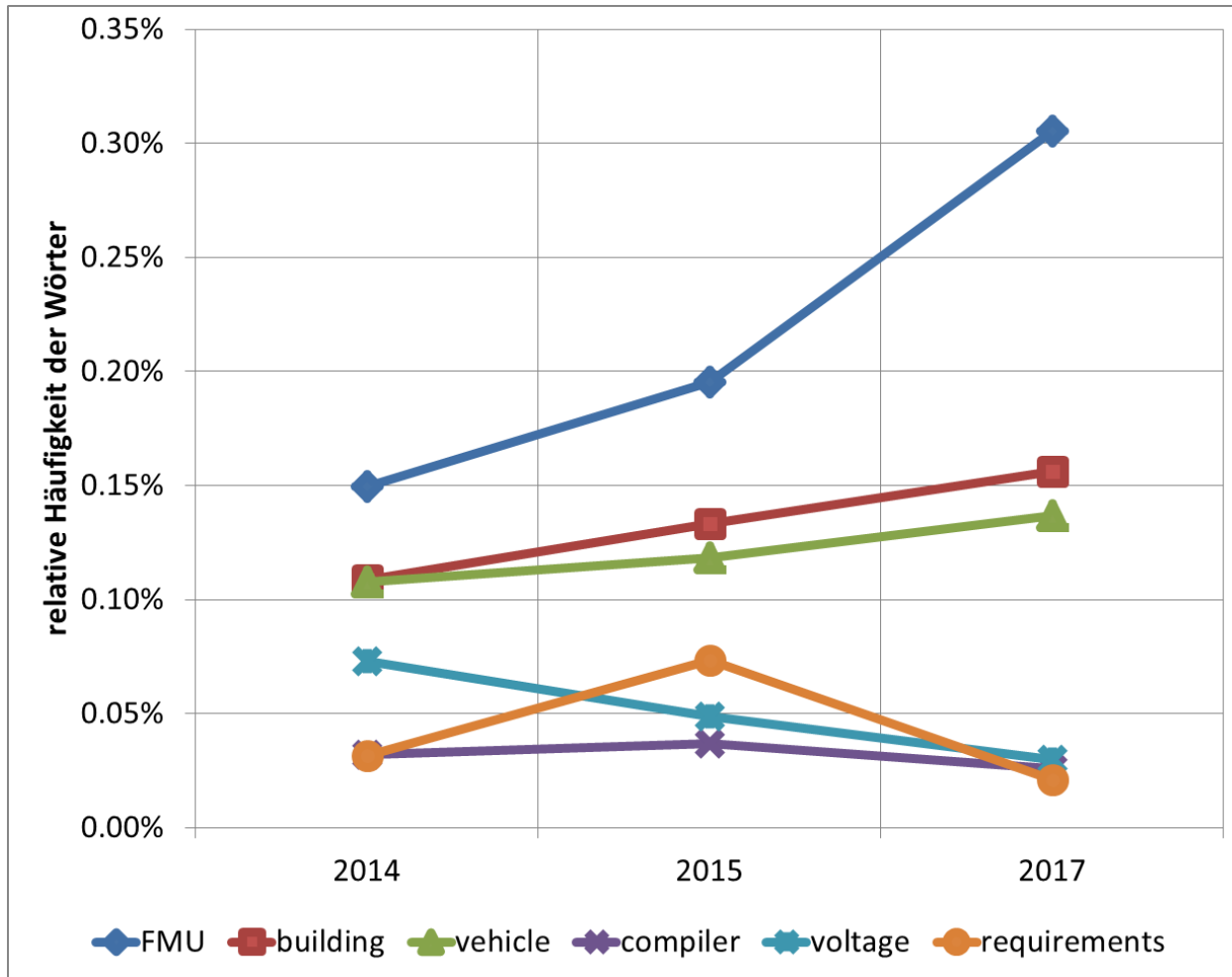
A Platform for the Agent-based Control of HVAC Systems

Roozbeh Sangi, Felix Bünning,
Johannes Fütterer
and Dirk Müller

Themen 2017



Trends



Schwerpunkt – CI

- Bibliotheken automatisiert testen

Dassault Systèmes

Test-Driven Library Development: Best practices and usage of Modelica testing solutions including the novel Testing Library

UDK

Continuous Integration: Testing Modelica libraries



by Modelon

Schwerpunkt – Embedded Targets

- Microcontroller emulieren, einbinden, deployen

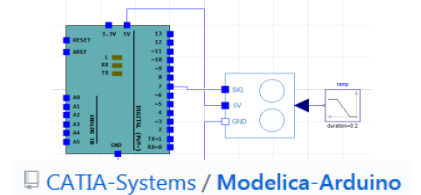
Wolfram

Build your Own Hardware Lab with Modelica and Arduino!

ESI

Modeling of a Mobile Inverted Pendulum System (MIPS)

Modelica Arduino Library
by Dassault Systèmes

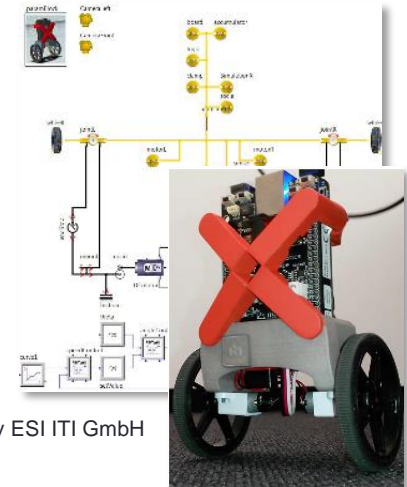


Towards a Standard-Conform,
Platform-Generic
and Feature-Rich Modelica Device
Drivers Library

Bernhard Thiele,
Thomas Beutlich, Volker Waurich,
Martin Sjölund and Tobias Bellmann

EMPHYSIS

EMPHYSIS – Embedded systems
with physical models in the
production code software



Interactive FMU-Based
Visualization for an Early Design
Experience

Volker Waurich and Jürgen Weber

Model-based Embedded Control
using Rosenbrock Integration
Methods

Hans Olsson, Sven Erik Mattsson,
Martin Otter, Andreas Pfeiffer,
Christoff Bürger
and Dan Henriksson



Schwerpunkt – FMU-Master

- Tools zur Simulation mehrerer FMUs

Experimenting with Matryoshka Co-Simulation: Building Parallel and Hierarchical FMUs

Virginie Galtier, Michel Ianotto,
Mathieu Caujolle,
Rémi Corniglion,
Jean-Philippe Tavella,
José Évora Gómez,
José Juan Hernández Cabrera,
Vincent Reinbold
and Enrique Kremers

Application of Richardson Extrapolation to the Co-Simulation of FMUs from Building Simulation

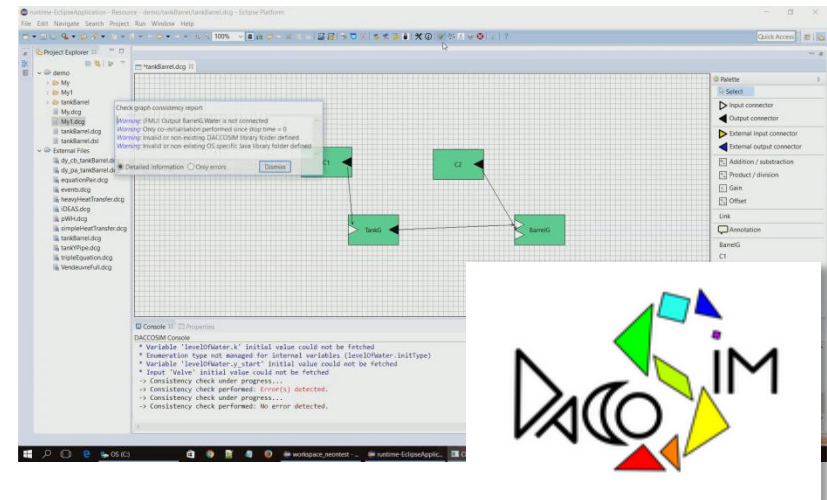
Christoph Clauss, Kristin Majetta
and Richard Meyer

Scaling FMI-CS Based Multi-Simulation Beyond Thousand FMUs on Infiniband Cluster

Stephane Vialle,
Jean-Philippe Tavella, Cherifa Dad,
Remi Corniglion, Mathieu Caujolle
and Vincent Reinbold

Towards Medical Cyber-Physical Systems: Modelica and FMI based Online Parameter Identification of the Cardiovascular System

Jonas Gesenhues, Marc Hein,
Maike Ketelhut, Thivaharan Albin
and Dirk Abel



by EDF Lab Paris-Saclay and CentraleSupélec