Center Activities
Since its creation in October 1995, the former MISS Center at Clausthal University of Technology, has moved as German McLeod Institute of Simulation Science at the University of Hamburg in 1999. Meanwhile it has started several activities in the field of simulation in education and research. The McLeod Institute of Simulation Sciences, Hamburg Center, under the chair of Prof. Dr. Dietmar P. F. Möller, successfully applied together with the MISS Center CSU, Chico, Prof. Dr. Roy Crosbie, for several transatlantic grants from the European Commission Directorate Education and Culture and the U.S. DoE FIPSE, with the framework of the McLeod Virtual Campus Project, the USE-ME project (United States-Europe Multicultural Alliance in Education in Computer Science and Engineering) and the complementary activity project USE-eNET (United States – Europe e-Learning Network Alliance in Science and Engineering).

Activities of the MISS Center Hamburg in Education and Training
Courses in:
- Computational Modeling and Simulation: Methodology and Applications (Möller)
- Discrete Time Systems Simulation and Optimization (Page, Wittmann)
- Modeling and Simulation in Solid States Physics (Möller)
- Simulation in Multimodal Transportation and Logistics (Möller)
- Computer Engineering (Möller)
- Project Management (Möller)
- Embedded Systems/Embedded Control (Möller, Mayer-Lindenberg)
- Robotics and Mobile Autonomous Systems (Koch, Möller)
- RoboCup – Soccer Playing mobile Autonomous Systems (Koch, Möller)

Activities of the MISS Center Hamburg in Research
- Simulation and Optimization of Maritime Transportation and Logistics (supported by Industry)
- Simulation in Coronary Heart Diseases Diagnosis (supported by National Research Fund)
- Simulation in Mathematical Statistics (supported by National Research Fund)
- Simulation in Embedded Control Systems (supported by National Research Fund)
- Virtual and Augmented Reality in Rescue Engineering (supported by Industry)
- Virtual Reality in Tunnel Projects (supported by National Research Fund)
- Virtual Reality in Damming-Up Reservoir System (supported by National Research Fund)
- Nanotechnology (National Research Fund)

Other Scientific MISS Center Hamburg Activities
- Program Chair ASIM 2005, Nurenberg, Germany
- Track Conference/Program Chair ESM 2005, Riga, Latvia
- Member Program Committee and Track Chair IEEE eit Conference 2005, Lincoln, Nebraska, 2005
- Member Program Committee 2nd EFUC Conference, Paris, France, 2005
- Member Program Committee Underground Infrastructure of Urban Areas 2005, Wroclaw, Poland
- Program Chair ASIM 2006, Hannover, Germany
- Track Conference/Programm Chair ESM 2006, Bonn, Germany
MISS Center Hamburg Advances
New grant from German Research Foundation (DFG) for 5 years establishing a Graduate College in Nano-structures “Taylored Metal Semiconductor Hybrid Systems” with 15 + 10 PhD grants

MISS Center Hamburg Facilities
In January 1999, the MISS Center Germany moved from Clausthal to Hamburg, into a new building with new facilities for the Chair of Computer Engineering and the Hamburg MISS Center. Due to that new situation, the Hamburg McLeod Center set up its own MISS Laboratory for Computer Modeling and Simulation, together with office space for MISS employees, Guest-Researchers, Guest- and/or Visiting Professors, Industrial Partners, etc. The MISS Center also participate from the following facilities:

- Laboratory for Computer Aided Intelligent Systems Engineering (CAISE)
- Laboratory for ICT-Systems and Data Management (ISDM)
- Laboratory for Java- and Web-Technologies (JAVE)
- Laboratory for Medical Technology and Medical Informatics (MIT)
- Laboratory for Robotics and Mobile Autonomous Systems (RAMSYS)
- Laboratory for Embedded Systems & Embedded Control (SMART)
- Laboratory for Neuron-Informatics (SYNAPSE)
- McLeod Institute of Simulation Science German Chapter Hamburg und Labor System Simulation (SYSSI)
- Laboratory for Virtual & Augmented Reality (VIRGIN)

Local Workstation Network consisting of:
1 x Ultra Enterprise 450
2 x SUN Ultra 60/1300
Personal-Computers:
2 x AMD Athlon 2000+
1 x Dual Athlon 1 GHz
1 Dual PIII 1 GHz
13 x P4 3 GHz
1 x P4 2,8 GHz
4 x P4 2,4 GHz
2 x P4 1,6 GHz
3 x PIII 850
3 x PII 400
1 x PII 300
2 x IBM compatible PC with 80386 Processors  (Local Bus)
1 x SlimNote 5100 C
2x IBM Thinkpad R31
1x Apple Powerbook G4
1x Toshiba 4000 CDT
1x Dell Inspirion 4100
Robots:
Kobra RS Robot System
Junghcinrich Industrial-Robot
GRAU-Industrial Robot System
Board Production Facility (LPKF) containing:
Fräbohrplotter ProtoMat 95s
SMD Device ZelPlace 220
Pressure contacting facility MiniContac II
Multilayer Press MultiPress II
Reflow Oven ZelFlow RO4

MISS Hamburg Center Simulation Tools
The principle simulation software used by the current center members include:
ARENA, BIOPSI, DORA, FuzzySoft, ISSOP, MATLAB, ModelMaker, SIMULINK, SIMPLEX II; ProModel;
COMSOL Multiphysics Tool
MISS Hamburg Center Highlights
The Center intends to combine basic research of simulation methodology coupled tightly with applications in the various fields described under research activities. As a delight result we are able announcing a reasonable amount of research contracts with the industrial side as well as with national grants. Moreover the Center Highlights covers guest visits from different locations:

- Dr. Poul Bonde, Aarhus University, Aarhus, Denmark, Research work on ECTS in Higher Education Programs of the EU
- Prof. Dr. Akilesh, Indian Institute of Science, Bangalore, India, Research work on Knowledge Engineering and Change Management
- Mr. Sanjib Ghosh, DaimlerChrysler Research and Technology India Pvt. Ltd. Bangalore, India, Research work on Embedded Computing Systems
- Prof. Dr. David Murray-Smith, University of Glasgow, Scotland, Research work on Discrete Event Modeling and Simulation and USE-eNET Project
- Prof. Dr. Hamid Vakilzadian, University of Nebraska, Lincoln, USA, Research work on Embedded systems and VHDL, and USE-eNET Project
- Dr. R. Haas, Daimler-Chrysler, Research and Technology Center at Bangalore, India. Research topics in IT-Security
- Prof. Dr. E. Godehard, Universität Düsseldorf, Germany, Natural Family Planning Project
- Dr. Luisegard Ayalew, University Addis Ababa, Ethiopia, Modeling and Simulation in Geotechnology

MISS Hamburg Center Thesis: PhD, MSc

PhD:
Period 2005/2006
Christian Scherpe B. Wolfinger (K. Kaiser) Emulation gekoppelter Rechnernetze mit
lastabhängigem Verzögerungs- und Verlustverhalten

MsC:
Period 2005/2006
Olaf C. Bauer J.W. Schmidt (K. Kaiser) Integration verteilter Geodatendienste: Ein
Internetportal für die Metropolregion Hamburg

Thomas-Peter D.P.F. Möller (J.W. Schmidt) Dynamisches Testen von Quellcode im Bereich(mesher Systeme

Czudnochowski J.W. Wittmann mobiler autonomer Systeme

Ingo Brehmer B. Wolfinger (K. Kaiser) Realisierung eines IP-basierten Netzemulators

Niels Hoffmann K. Kaiser (J.W. Schmidt) Offene Integration von Geo- und Planungsdiensten
in ein Internet-Contentportal

Katharina Daskalaki E. Wolfinger (K. Kaiser) Architektur und adaptive Algorithmen zur Qualitäts-
verbesserung von Videokommunikation aus Endbenutzer-Antersicht

Görgün Kilic M. Lehmann Eignung eines Java Server Faces Frameworks

Zaza Jgarkava (K. Kaiser) für die Bedienung unterschiedlicher Client-Typen

Imad Gourdalo B. Page (K. Kaiser) Entwurf und Implementierung von hochregellager-
spezifischen Modellkomponenten für das Simulationsframework DESMO-J

Andreas Ruge D.P.F. Möller (W. Menzel) Konzept und Realisierung zur Anzeige und
Bearbeitung interaktiver Skripte

Jan Bendler D.P.F. Möller (W. Hansmann) Fuzzylogik in der four legged league – Objektidentifi-
fikation unter Verwendung unscharfer Mengen

Mark Beck D.P.F. Möller (W. Hansmann) Identifikation und Analyse von Bewertungsmetho-
diken sowie –kriterien und ihre Übertragbarkeit auf den Bereich des eLearnings
MISS Center Hamburg Publications:


Möller, D. P. F.: IIS: Interoperable Industry Solutions, EFUC Conference, Vilnius, Lithuania, May 2005
Möller, D. P. F.: HLA Simulation For Land Based Transportation, SCS Spring Simulation Conference, Huntsville, Alabama, April 2-7, 2006, pp. 548-552
Möller, D. P. F., Crosbie, R. E.: United States – Europe e-Learning Network (USE_eNET) in Education: A Follow-up Report, SCS Summer Simulation Conference, Calgary, Canada, July 31 – August 3, 2006 (accepted paper)
Möller, D. P. F., Vakilzadian, H., Crosbie, R. E.: Soccer Playing Robots: A Transatlantic Engineering Student Team Project In The USE_eNET Project, SCS Summer Simulation Conference, Calgary, Canada, July 31 – August 3, 2006 (accepted paper)

Prepared and Submitted by
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