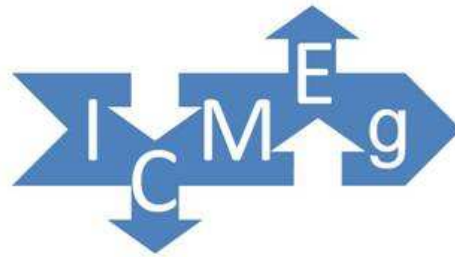


Software Solutions for
 Integrated **C**omputational **M**aterials **E**ngineering



1st International Workshop

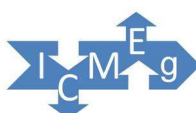
Aachen/Rolduc, June 24th to 27th 2014

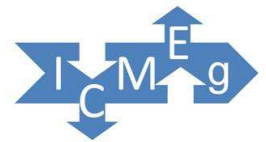
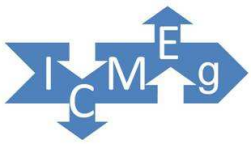
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thermodynamics	casting		your code?		ab-initio	
		microstructure		forming		
joining	1 st International Workshop on Software Solutions for Integrated Computational Materials Engineering ICME June 24 th - 27 th 2014 Aachen / Rolduc www.icmeg.info					
						your solutions ?
your needs?						
						numerical methods
algorithms		visualisation	properties		your suggestions ?	
	standards			platforms		

organized by: *Integrated Computational Materials Engineering expert group ICMEg*
 supported by the European Commission under grant N° NMP3-CA-2013-606711

sponsored by:





The ICMEg scope

Integrated Computational Materials Engineering - ICME - by its nature draws on the combination and the simultaneous or consecutive use of a variety of software tools. By now the major developments in the area of ICME have successfully been driven essentially by academic and industrial users of simulation software.

In spite of ICME currently emerging as a new and powerful discipline, coupling of different software tools is still in its infancy and represents a major issue consuming significant effort in terms of time and workforce if a coupling is realized at all.

ICMEg – the Integrated Computational Materials Engineering expert group – aims at developing a global open standard for information exchange between the heterogeneous varieties of numerous simulation tools.

Once being established, such an open and easily accessible formulation of a global standard will

- significantly facilitate the exchange of data between different tools
- create new options and functionalities of the present tools
- allow for easy integration between commercial and academic approaches
- provide the pathway for life-cycle modeling of components/products
- allow for global optimisation of process chains
- stimulate many further new developments

The objective of this 1st International Workshop on Software Solutions for ICME is to:

Discuss & outline a concept for a global and open standard for information exchange in ICME

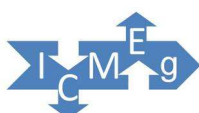
To make the first important steps toward this objective this workshop invites researchers, engineers, IT experts and decision makers from industry, SME and academia and will

Convene and network software providers/developers

Create awareness about existing models and solutions

Identify options & needs for coupling of individual codes

Generate a comprehensive, structured inventory of solutions



Call for contributions

Contributions should particularly emphasize options and needs for interaction with other models at the same scale and/or across the scales especially in following areas:

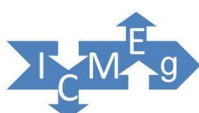
- Process models at the component scale: component design, mould filling, casting, forming, joining, thermomechanical treatments, machining,
- Microstructure simulations: phase-field, phase-field crystal, cellular automata, precipitation modeling, crystal plasticity models, use of experimentally determined microstructures, microstructure databases, synthetic microstructures, ...
- Determination of effective properties from microstructures: mathematical homogenization, RVE's, volume averaging, virtual testing, ...
- Thermodynamic and kinetic models and databases
- Discrete models (electronic, atomistic, mesoscopic): ab-initio, molecular dynamics, DFT,
- Numerical methods: meshing/remeshing, solver strategies, visualisation/post processing, homogenization technologies,...
- Simulation platform approaches: control and steering of different software tools, distributed simulations

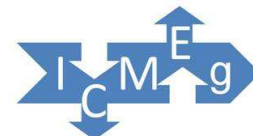
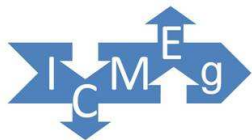
Venue

Rolduc Abbey - located in the Netherlands close to Aachen, Germany - has been selected as THE place for this 1st International Workshop on Software Solutions for ICME. Its 900 years of history, its quiescent ambient inspiring for deep thoughts, its library as a symbol for collected knowledge, its court-yard as a scenic place for a nice group photo and last but not least its nice abbey cellars inspiring informal discussions will provide a most suitable frame for the workshop.

for further info see:

www.rolduc.com





Deadlines

end of October 2013	workshop website www.icmeg.info on-line
early November 2013	first announcement /call for contributions
1 st of February 2014	second announcement
1 st of March 2014	deadline abstract submission
1 st of April 2014	notification of acceptance
1 st of May 2014	deadline for early registration
24 th – 27 th June 2014	1 st Workshop on Software Solutions for ICME

Registration/sponsoring/exhibition

Registration for the workshop proceeds via the workshop website www.icmeg.info. A limited number of free admissions are available for qualified students. Respective applications - including a letter of endorsement - should be sent to organisation@icmeg.info. ICMEg welcomes any support of this workshop by sponsors. Limited space for exhibitors is available in the cloister and in some rooms of the abbey. Please contact organisation@icmeg.info for further information.

Scientific Committee

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Germany

Ulrich Prahla (co-chair)
Germany

John Agren
Roger Assaker
Michele Chiumenti
Anders Engstrom
Albert Konter
Yuwen Cui
Paul Mason
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