

Simone E. Hieber

JOURNAL PUBLICATIONS

S.E. Hieber and P. Koumoutsakos. A Lagrangian particle method for the simulation of linear and nonlinear elastic models of soft tissue. *J. Comp. Phys.*, 227:9195-9215, 2008.

S.E. Hieber and P. Koumoutsakos. An immersed boundary method for smoothed particle hydrodynamics of self-propelled swimmers. *J. Comp. Phys.*, 227:8636-8654, 2008

I.F. Sbalzarini, J.H. Walther, M.Bergdorf, S.E. Hieber, E.M. Kotsalis and P. Koumoutsakos. PPM - A highly efficient parallel particle mesh library for the simulation of continuum systems. *J. Comp. Phys.*, 215:566-588, 2006.

S. E. Hieber and P. Koumoutsakos. A Lagrangian particle level set method. *J. Comp. Phys.*, 210:342-367, 2005.
(more than 25 times cited in ISI Web of Science)

S. E. Hieber, J. H. Walther, P. Koumoutsakos, Remeshed smoothed particle hydrodynamics simulation of the mechanical behavior of human organs, *Journal of Technology and Health Care*, 12(4), 305-314, 2004.

REVIEW

S. Hieber, B. Müller, *Nanomedizin*, Der MKG-Chirurg 4 (2011) 7-15

CONFERENCE PAPERS

I. F. Sbalzarini, J. H. Walther, B. Polasek, P. Chatelain, M. Bergdorf, S. E. Hieber, E. M. Kotsalis, P. Koumoutsakos. A Software Framework for Portable Parallelization of Particle-Mesh Simulations. *Lecture Notes in Computer Science*, 4128, 730-739, 2006.

CONFERENCE ABSTRACTS

S.E. Hieber, P. Koumoutsakos
Particle Methods For The Simulation Of Soft Tissue, 6th Congress of European Society of Biomechanics, Luzern, Switzerland, July 6-9, 2008

S.E. Hieber, P. Koumoutsakos
Fluid-Structure Interactions using remeshed Smoothed Particle Hydrodynamics, Conference on Immersed Boundary Methods in Particle Methods, Grenoble, France, October 3-5, 2003

Mauch, K.; Hieber, S. E.; Behrendt, K. and Reuss, M.
Model based design of metabolic pathways. ESBES-3, Kopenhagen, 2000

Mauch, K.; Schuster, S.; Hieber, S. E.; Behrendt, K. and Reuss, M.
Computer aided design of metabolic networks. Biotechnology 2000, Berlin.

Mauch, K.; Hieber, S. E. and Reuss, M.
Pathway analysis and pathway designing in Metabolic Engineering. 4th international congress on biochemical engineering, Stuttgart., 2000

INVITED TALKS

5/7/2008 Key Aspects of Particle Simulations
Pre-course at 16th Congress of European Society of Biomechanics, Luzern

21/11/2005 Fluid Simulations Using Particle Methods
Turbulence and Heat Transfer Lab of Prof Kasagi, University of Tokyo

9/12/2005 Advanced Techniques in Particle Methods: Remeshing, Parallelizing, Fluid-Solid Interaction
Lab of Prof. Koshizuka, University of Tokyo