
Contents

Global-local Petrov-Galerkin formulations in the Meshless Finite Difference Method <i>Slawomir Milewski, Janusz Orkisz</i>	1
Treatment of general domains in two space dimensions in a Partition of Unity Method <i>Marc Alexander Schweitzer, Maharavo Randrianarivony</i>	27
Sampling Inequalities and Support Vector Machines for Galerkin Type Data <i>Christian Rieger</i>	51
Meshfree Vectorial Interpolation Based on the Generalized Stokes Problem <i>Csaba Gáspár</i>	65
Pressure XFEM for two-phase incompressible flows with application to 3D droplet problems <i>Sven Gross</i>	81
Special-relativistic Smoothed Particle Hydrodynamics: a benchmark suite <i>Stephan Rosswog</i>	89
An exact particle method for scalar conservation laws and its application to stiff reaction kinetics <i>Yossi Farjoun, Benjamin Seibold</i>	105
Application of Smoothed Particle Hydrodynamics to Structure Formation in Chemical Engineering <i>Franz Keller, Ulrich Nieten</i>	125

Numerical validation of a constraints-based multiscale simulation method for solids	
<i>Konstantin Fackeldey, Dorian Krause, Rolf Krause</i>	141
Coupling of the Navier-Stokes and the Boltzmann equations with a meshfree particle and kinetic particle methods for a micro cavity	
<i>Sudarshan Tiwari, Axel Klar</i>	155
Accuracy and Robustness of Kinetic Meshfree Method	
<i>Konark Arora, Suresh M. Deshpande</i>	173
Kinetic meshless methods for unsteady moving boundaries	
<i>V. Ramesh, S. Vivek, S. M. Deshpande</i>	189
Efficient cloud refinement for kinetic meshless methods	
<i>M. Somasekhar, S. Vivek, K. S. Malagi, V. Ramesh, S. M. Deshpande . .</i>	207
Fast exact evaluation of particle interaction vectors in the finite volume particle method	
<i>Nathan J. Quinlan, Ruairi M. Nestor</i>	219
Parallel summation of symmetric inter-particle forces in smoothed particle hydrodynamics	
<i>Johannes Willkomm, H. Martin Bucker</i>	235
Meshfree Wavelet-Galerkin Method for Steady-State Analysis of Nonlinear Microwave Circuits	
<i>Alla Brunner</i>	249

Meshfree Methods for Partial Differential Equations V

Griebel, M.; Schweitzer, M.A. (Eds.)

2011, VIII, 270 p., Hardcover

ISBN: 978-3-642-16228-2