Journal Papers

[1] P. DIEHL, F. FRANZELIN, D. PFLÜGER, AND G. C. GANZENMÜLLER, *Bond-based peri-dynamics: a quantitative study of Mode I crack opening*, International Journal of Fracture, (2016), pp. 1–14.

Series- and conference contributions

[2] P. DIEHL AND M. A. SCHWEITZER, *Efficient neighbor search for particle methods on GPUs*, in Meshfree Methods for Partial Differential Equations VII, M. Griebel and M. A. Schweitzer, eds., vol. 100 of Lecture Notes in Computational Science and Engineering, Springer, 2014. Also available as INS Preprint No. 1405.

[3] ——, *Simulation of wave propagation and impact damage in brittle materials using peridynamics*, in Recent Trends in Computational Engineering – CE2014, M. Mehl, M. Bischoff, and M. Schäfer, eds., Lecture Notes in Computational Science and Engineering, Springer, 2015.

[4] F. FRANZELIN, P. DIEHL, AND D. PFLÜGER, *Non-intrusive uncertainty quantification with sparse grids for multivariate peridynamic simulations*, in Meshfree Methods for Partial Differential Equations VII, M. Griebel and M. A. Schweitzer, eds., vol. 100 of Lecture Notes in Computational Science and Engineering, Springer, 2014. Also available as INS Preprint No. 1408.

Invited talks and Presentations

[5] P. DIEHL, *Efficient k-nearest neighbor search on the GPU*. Seventh International Workshop Meshfree Methods for Partial Differential Equations, 09.09-11.09 2013, Bonn, Germany.

[6] ——, *Coupling CPU and GPU to simulate efficient dynamic cracks and fractures in solids*. 12th U.S. National Congress on Computational Mechanics (USNCCM12), 21.07-25.07 2013, Reilagh, US.

[7] ——, *Simulation of high-speed velocity impact on ceramic materials using the Peridynamic technique*. III International Conference on Particle-Based Methods. Fundamentals and Applications. Particles 2013, 18.09-20.09 2013, Stuttgart, Germany.

[8] ——, *Simulation of wave propagation and impact damage in brittle materials using the peridynamics technique*. 11th. World Congress on Computational Mechanics (WCCM XI), 20.07-25.07 2014, Barcelona, Spain.

[9] ——, *Sensivity study for wave propagation and impact damage in brittle materials using peridynamics*. ASME International mechanical Engineering Congress and Exposition, 14.11-20.11 2014, Montreal, Canada.

[10] ——, *Efficient particle-based simulation of dynamic cracks and fractures in ceramic material*. GPU Technology Conference 2014, 24.03-27.03 2014, San Francisco, US.

[11] ——, *Simulation of wave propagation and impact damage in brittle materials using the peridynamics technique.* 3rd Workshop on Computational Engineering, 06.10-10.10 2014, Stuttgart, Germany.

[12] ——, *A sensitivity study for critical traction in quasi-static peridynamics simulations.* 1st. PAN-American Congress on Computational Mechanics, 27.04-30.04 2015, Buenos Aires, Argentina.

[13] ——, *A benchmark study for mode I crack opening for brittle materials.* 13th US National Congress on Computational Mechanics (USNCCM), 26.07-30.07 2015, San Diego, US.

[14] ——, *Modeling ductile materials with bond-based softening peridynamic model.* 12th. World Congress on Computational Mechanics (WCCM XII), 24.07-29.07 2015, Seoul, Korea.

[15] ——, *Energy equivalence for the horizon independent bond-based peridynamic softening model according to classical theory.* The Mathematics of Finite Elements and Applications 2016 (MAFELAP), 14.06-17.06 2016, London, UK.

[16] ——, *Numerical Validation of the bond-based Softening Model.* SIAM Mathematical Aspects of Material Science 2016, 07.05-12.05 2016, Philadelphia, US.

Posters

[17] P. DIEHL, *Applying Tools and Techniques from Software Engineering in Computational Mechanics.* 12th U.S. National Congress on Computational Mechanics (USNCCM12), 21.07-25.07 2013, Raleigh, US.

[18] ——, *Numerical verification of the bond-based peridynamic softening model against classical theory.* Nonlocal Models in Mathematics, Compution, Science, and Engineering, 26.11-28.11 2015, Oak Ridge, US.

Theses

[19] P. DIEHL, *Implementierung eines Peridynamik-Verfahrens auf GPU*, Diplomarbeit, Institute of Parallel and Distributed Systems, University of Stuttgart, 2012.