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[1] M. Bußler, P. Diehl, D. Pflüger, S. Frey, F. Sadlo, T. Ertl, and M. A. Schweitzer, *Visualization of Fracture Progression in Peridynamics*, Computer & Graphics, 67 (2017), pp. 45–57.

[2] P. Diehl, F. Franzelin, D. Pflüger, and G. C. Ganzenmüller, *Bond-based peridynamics: a quantitative study of Mode I crack opening*, International Journal of Fracture, 2 (2016), pp. 157–170.

[3] P. Diehl, I. Tabiai, F. W. Baumann, D. Therriault, and M. Levesque, *Long term availability of raw experimental data in experimental fracture mechanics*, Engineering Fracture Mechanics, 197 (2018), pp. 21–26.

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[1] P. Diehl, M. Bußler, D. Pflüger, S. Frey, T. Ertl, F. Sadlo, and M. A. Schweitzer, *Extraction of Fragments and Waves After Impact Damage in Particle-Based Simulations*, Springer International Publishing, Cham, 2017, pp. 17–34.

[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, pp. 81–95.

[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., vol. 105 of Lecture Notes in Computational Science and Engineering, Springer, 2015, pp. 251–265.

[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 International Publishing, 2014, pp. 115–143.

[5] T. Heller, P. Diehl, Z. Byerly, J. Biddiscombe, and H. Kaiser, *HPX – An open source C++ Standard Library for Parallelism and Concurrency*, in Proceedings of OpenSuCo 2017, Denver, Colorado USA, November 2017 (OpenSuCo 17), 2017, p. 5.

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Technical reports

[1] P. Diehl, R. Lipton, and M. A. Schweitzer, *Numerical verification of a bond-based softening peridynamic model for small displacements: Deducing material parameters from classical linear theory*, tech. rep., Institut für Numerische Simulation, 2016.

Invited talks and Presentations

[1] 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.

[2] ——, *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.

[3] ——, *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.

[4] ——, *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.

[5] ——, *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.

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

[7] ——, *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.

[8] ——, *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.

[9] ——, *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.

[10] ——, *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.

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

[12] ——, *Visualization of Fragments, Stress and Fracture Progression in Peridynamics*. Isogeometric Analysis and Meshfree Methods, 10.10-12.10 2016, San Diego, USA.

[13] ——, *Modeling ductile materials with bond-based softening peridynamic model*. 12th. World Congress on Computational Mechanics (WCCM XII), 24.07-29.07 2016, Seoul, Korea.

[14] ——, *Modeling and simulation of crack and fractures with peridynamics in brittle materials*. HIM Junior Seminar, 08.02. 2017, Bonn, Germany.

[15] ——, *Experimental Validation of Elastic State Based Peridynamic for PMMA and epoxy materials*. 14th U.S. National Congress on Computational Mechanics (USNCCM14), 17.07-20.07 2017, Montreal, Canada.

[16] ——, *A Review for Benchmark Experiments against Peridynamic Models*. Nonlocal Methods in Fracture, 15.01-16.01 2018, Austin, USA.

[17] ——, *Extracting constitutive mechanical parameters in linear elasticity using the virtual fields method within the ordinary state-based peridynamics framework*. Optimization days 2018, 07.05-09.05 2018, Montreal, Canada.

[18] ——, *A Review for Benchmark Experiments against Peridynamic Models*. 13th. World Congress on Computational Mechanics (WCCM XIII), 23.07-27.07 2018, New York City, US.

[19] ——, *Extracting constitutive mechanical parameters in linear elasticity using the virtual fields method within the ordinary state-based peridynamics framework*. 18th U.S. National Congress for Theoretical and Applied Mechanics, 04.06-09.06 2018, Rosemont, US.

Posters

[1] 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.

[2] ——, *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.

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

[2] ——, *Modelling and Simulation of cracks and fractures with peridynamics in brittle materials*, Doktorarbeit, University of Bonn, 2017.

Preprints

[1] P. Diehl, P. K. Jha, H. Kaiser, R. Lipton, and M. Levesque, *Implementation of Peridynamics utilizing HPX–the C++ standard library for parallelism and concurrency*, arXiv preprint arXiv:1806.06917, (2018).

[2] P. Diehl, M. Seshadri, T. Heller, and H. Kaiser, *Integration of CUDA Processing within the C++ library for parallelism and concurrency (HPX)*, arXiv preprint arXiv:1810.11482, (2018).

[3] R. Tohid, B. Wagle, S. Shirzad, P. Diehl, A. Serio, A. Kheirkhahan, P. Amini, K. Williams, K. Isaacs, K. Huck, et al., *Asynchronous Execution of Python Code on Task Based Runtime Systems*, arXiv preprint arXiv:1810.07591, (2018).

Raw experimental data

[1] I. Tabiai, R. Delorme, P. Diehl, L. L. Lebel, and M. Levesque, *PMMA 3 point bending test until failure loaded in displacement*, Feb. 2018.