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Education

- 2016 **PH.D. Stanford University.**
MECHANICAL ENGINEERING, MECHANICS & COMPUTATION.
- 2011 **M.Sc. University of Washington.**
CIVIL ENGINEERING, SOLID & STRUCTURAL MECHANICS.
- 2009 **B.Sc. University of Maine, *summa cum laude.***
CIVIL ENGINEERING, STRUCTURAL MECHANICS.

Professional Experience

- Feb. 2017 - **Princeton University, Assistant Professor.**
Dept. of Civil and Environmental Engineering
- Aug. 2016 - **University of Texas at Austin, Visiting Scholar.**
Feb. 2017 Institute for Computational and Engineering Science
- Aug. 2016 - **Princeton University, Post-Doctoral Fellow.**
Feb. 2017 Dept. of Civil and Environmental Engineering
- Sept. 2011 - **Stanford University, SGF Fellow, Graduate Researcher.**
Sept. 2016 Dept. of Mechanical Engineering
- Sept. 2009 - **University of Washington, Graduate Researcher.**
Sept. 2011 Dept. of Civil & Environmental Engineering

Honors & Awards

- 2016 Juan C. Simo Best Thesis Award
- 2016 ICES Post-doctoral Fellowship, University of Texas at Austin
- 2015 Robert J. Melosh Medal
- 2015 SES Annual Technical Meeting, 1st Place Poster Award, Texas A&M University
- 2015 SES Annual Technical Meeting, Travel Award
- 2015 Elsevier Computers & Mathematics Best Mathematically Oriented Poster Award
- 2015 US National Congress on Computational Mechanics Poster Competition Award
- 2014 Centennial Teaching Assistant Award, Stanford University
- 2014-2016 Stanford Graduate Fellowship, Stanford University
- 2014 SES Annual Technical Meeting, 2nd Place Poster Award, Purdue University
- 2014 SES Annual Technical Meeting, Travel Award
- 2011-2012 Gere Research Fellowship, Stanford University
- 2009-2011 Graduate Assistantship, University of Washington
- 2009 Outstanding Graduating Student in Engineering, University of Maine

- 2008 Weston S. Evans Scholarship, University of Maine
2007 George K. Walding Scholarship, University of Maine
2006 Presidential Achievement Award, University of Maine
2005-2009 International Student Tuition Waiver Scholarship, University of Maine

Publications

Peer Reviewed Articles

- [7] M.M. Chiamonte and E.S. Gawlik. “Resolving moving boundary layers with time-dependent auxiliary mappings” (In progress).
- [6] M.M. Chiamonte, L.M. Keer, and A.J. Lew. “Crack path instabilities in thermoelasticity” (In progress).
- [5] M.M. Chiamonte, Y. Shen, and A.J. Lew. “Mapped finite element methods: High-order approximations of problems on domains with cracks and corners”. *International Journal for Numerical Methods in Engineering* (2017). DOI: 10.1002/nme.5486.
- [4] M.M. Chiamonte, E.S. Gawlik, H. Kabaria, and A.J. Lew. “Universal Meshes for the Simulation of Brittle Fracture and Moving Boundary Problems”. *Innovative Numerical Approaches for Multi-Field and Multi-Scale Problems*. Springer International Publishing, 2016, pp. 115–134. DOI: 10.1007/978-3-319-39022-2_6.
- [3] M.M. Chiamonte, Y. Shen, L.M. Keer, and A.J. Lew. “Computing stress intensity factors for curvilinear cracks”. *International Journal for Numerical Methods in Engineering* 104.4 (Oct. 2015), pp. 260–296. DOI: 10.1002/nme.4938.
- [2] R. Rangarajan, M.M. Chiamonte, M.J. Hunsweck, Y. Shen, and A.J. Lew. “Simulating curvilinear crack propagation in two dimensions with universal meshes”. *International Journal for Numerical Methods in Engineering* 102.3-4 (Apr. 2015), pp. 632–670. DOI: 10.1002/nme.4731.
- [1] M.M. Chiamonte, P. Arduino, D.E. Lehman, and C.W. Roeder. “Seismic analyses of conventional and improved marginal wharves”. *Earthquake Engineering & Structural Dynamics* 42.10 (Aug. 2013), pp. 1435–1450. DOI: 10.1002/eqe.2280.

Thesis

- [2] M.M. Chiamonte. “Mapped Finite Element Methods with applications to the simulation of brittle fracture propagation”. Ph.D. Thesis. Stanford University, 2016.
- [1] M.M. Chiamonte. “An analysis of conventional and improved marginal wharves”. M.S. Thesis. University of Washington, 2011.

Presentations & Posters

Invited Presentations

- [14] University of Pittsburgh, Department of Mathematics, Pittsburgh, PA. Feb. 2017.
- [13] Cornell University, Dept. of Mechanical and Aerospace Engineering, Ithaca, NY. Apr. 2016.
- [12] Princeton University, Dept. of Civil and Environmental Engineering, Princeton, NJ. Mar. 2016.
- [11] University of Colorado, Dept. of Civil and Environmental Engineering, Boulder, CO. Mar. 2016.
- [10] University of Utah, Dept. of Mechanical Engineering, Salt Lake City, UT. Feb. 2016.
- [9] Duke University, Dept. of Civil and Environmental Engineering, Durham, NC. Feb. 2016.
- [8] University of Illinois, Dept. of Civil and Environmental Engineering, Urbana-Champaign, IL. Jan. 2016.
- [7] University of British Columbia, Dept. of Mechanical Engineering, Vancouver, BC, Canada. Jan. 2016.
- [6] Center for Subsurface Modeling, Institute for Computational Engineering and Science, University of Texas, Austin, TX. Oct. 2016.
- [5] Baker Hughes, Palo Alto Innovation Center. Aug. 2015.
- [4] Robert J. Melosh Competition held at Duke University, Raleigh, NC. **Awarded the Robert J. Melosh Medal.** Apr. 2015.
- [3] The Johns Hopkins University, Department of Civil Engineering, Baltimore, MD. Mar. 2015.
- [2] George Washington University, Department of Civil and Environmental Engineering, Washington D.C. Dec. 2014.
- [1] Laboratory for Modeling and Scientific Computing (MOX), Department of Mathematics "F. Brioschi", Politecnico di Milano, Milano, Italy. Aug. 2014.

Conference Presentations

- [9] *h-Auxiliary map methods for higher order solutions of crack problems.* 1st Pan-American Congress on Computational Mechanics (PANACM), Buenos Aires, Argentina. Apr. 2015.
- [8] *h-Auxiliary map methods: higher order solutions of crack problems and beyond.* 52nd Annual Technical Meeting of the Society of Engineering Science, Texas A&M University, College Station, TX. Oct. 2015.
- [7] *The h-version of the method of auxiliary mapping for higher order solutions of crack problems.* 13th US National Congress on Computational Mechanics (USNCCM), San Diego, CA. July 2015.

- [6] *The h-version of the method of auxiliary mapping for higher order solutions of crack problems*. Engineering Mechanics Institute (EMI), Stanford, CA. June 2015.
- [5] *Auxiliary map methods for higher order solutions of crack problems*. CompFest, Stanford University, Stanford CA. Dec. 2014.
- [4] *Higher order methods for fracture mechanics*. 51st Annual Technical Meeting of the Society of Engineering Science, Purdue University, West Lafayette, IN. Oct. 2014.
- [3] *Higher order methods for the simulation of curvilinear fracture propagation*. 11th World Congress on Computational Mechanics (WCCM XI), Barcelona, Spain. July 2014.
- [2] *Simulating curvilinear crack propagation*. 51st Annual Technical Meeting of the Society of Engineering Science, Purdue University, West Lafayette, IN. Oct. 2014.
- [1] *Simulating curvilinear fracture propagation*. CompFest, University of California, Berkeley, CA. Sept. 2013.

Posters

- [4] *Higher order methods for simulating cracking*. 13th US National Congress on Computational Mechanics, San Diego, CA. **Elsevier Award for the Best Mathematically Oriented Poster** and **USNCCM Poster Award**. July 2015.
- [3] *Higher order methods for the simulation of crack propagation*. 52nd Annual Technical Meeting of the Society of Engineering Science, Texas A&M University, College Station, TX. **First Place in Poster Competition**. Oct. 2015.
- [2] *Higher order methods for simulating fracturing*. 51st Annual Technical Meeting of the Society of Engineering Science, Purdue University, West Lafayette, IN. **Second Place in Poster Competition**. Oct. 2014.
- [1] *Higher order methods for simulating fracturing*. Army High Performance Computing Research Center Bootcamp Meeting, Santa Cruz, CA. July 2014.

Service

Reviewer

- 2017-present BIT Numerical Mathematics
- 2016-present ASCE

Organized Mini-symposia

- SES 2017 "The theoretical, experimental, and computational aspects of fracture mechanics" Co-organized with Prof. Linder (Stanford University), Prof. Ravi-Chandar (University of Texas at Austin), Prof. Elbanna (University of Illinois at Urbana-Champaign), Prof. Sukumar (University of California at Davis)

Memberships & Organizations

American Society of Civil Engineers (ASCE)

American Society of Mechanical Engineers (ASME)

Society for Industrial and Applied Mathematics (SIAM)

Society of Petroleum Engineers (SPE)

Tau Beta Pi (Engineering Honor Society)

Chi Epsilon (Civil Engineering Honor Society)

Francis Crowe Society



Certifications

2008 Engineering-in-training (EIT)