

Scott Ladenheim

- Introduction** I am currently an analyst programmer for Tessella in the Hague, Netherlands. In my position, I analyze data and build software to meet the needs of our clients. Prior to working at Tessella, I worked as head software engineer at Next Ocean B.V. My educational background is in computational mathematics with a focus on applied numerical linear algebra. My PhD research was on large-scale numerical simulations and the iterative solution of problems arising in computational science and engineering.
- Employment** **Tessella** August 2019 -
Analyst Programmer
Next Ocean B.V. September 2017 - July 2019
Software Engineer
University of Manchester July 2015 - September 2017
Postdoctoral Research Associate
Project Description: Physical Design Tools for 3-D Integrated Circuits and Systems
Lawrence Livermore National Laboratory
Computational Science Intern
June 2013 - August 2013, June 2014 - August 2014
Temple University August 2014 - May 2015
Research Assistant
Temple University August 2009 - May 2014
Teaching Assistant
- Education** **Ph.D in Mathematics**, Temple University, April 2015
Advisor: Daniel B. Szyld
Title: Constraint Preconditioning of Saddle Point Problems
Ph.D Research, University of Bologna, September 2013 - December 2013
Advisor: Valeria Simoncini
M.A. in Mathematics, Temple University, August 2012
B.S. in Mathematics, Syracuse University, May 2009, Magna Cum Laude
- Honors and Awards** **Award for Outstanding Research 2015-2016**
College of Science and Technology, Temple University
Second Prize, Student Paper Competition
13th Copper Mountain Conference on Iterative Methods 2014
Indefinite Preconditioning of the Coupled Stokes-Darcy System
- Journal Publications** **Constraint Preconditioning for the Coupled Stokes-Darcy System**
Prince Chidyagwai, Scott Ladenheim, and Daniel B. Szyld,
SIAM Journal on Scientific Computing, vol. 38 (2016) pp. A668-A690
Multipreconditioned GMRES for Shifted Systems
Tania Bakhos, Peter K. Kitanidis, Scott Ladenheim, Arvind K. Saibaba, and Daniel B. Szyld, SIAM Journal on Scientific Computing, vol. 39 (2017) pp. S222-S247
The MTA: An Advanced and Versatile Thermal Simulator for Integrated Systems Scott Ladenheim, Yi-Chung Chen, Milan Mihajlović, and Vasilis F. Pavlidis, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, vol. 37 (2018) pp. 3123-3136

Conference Publications	<p>IC Thermal Analyzer for Versatile 3-D Structures Using Multigrid Preconditioned Krylov Methods Scott Ladenheim, Yi-Chung Chen, Milan Mihajlović, and Vasilis F. Pavlidis, Proceedings of the 35th International Conference on Computer-Aided Design, 2016, pp.123:1–123:8</p> <p>Computationally Efficient Standard-Cell FEM-based Thermal Analysis Yi-Chung Chen, Scott Ladenheim, Charalampos Kalargaris, Milan Mihajlović, and Vasilis F. Pavlidis, Proceedings of the ACM/IEEE International Conference on Computer-Aided Design, pp.490-495, November 2016.</p>
Selected Presentations	<p>Indefinite Preconditioning of the Coupled Stokes-Darcy System 13th Copper Mountain Conference on Iterative Methods (Prize Talk) Copper Mountain Colorado, April 10, 2014</p> <p>Indefinite Preconditioning of the Coupled Stokes-Darcy System 2014 SIAM Annual Meeting, Chicago, July 9, 2014</p> <p>Indefinite Preconditioning of the Coupled Stokes-Darcy System Mid Atlantic Numerical Analysis Day 2014 Temple University, November 7, 2014</p> <p>Constraint Preconditioning for the Coupled Stokes-Darcy System CCMA PDEs and Numerical Methods Seminar Series Pennsylvania State University, February 27, 2015</p> <p>Indefinite Preconditioning of the Coupled Stokes-Darcy System 2015 SIAM Conference on Computational Science and Engineering Salt Lake City, March 15, 2015</p> <p>Constraint Preconditioning for the Coupled Stokes-Darcy System 8th International Congress on Industrial and Applied Mathematics Beijing, August 11, 2015</p> <p>Constraint Preconditioning for the Coupled Stokes-Darcy System 20th Rutherford Appleton Laboratory Didcot, October 22, 2015</p> <p>Constraint Preconditioning for the Coupled Stokes-Darcy System 2015 SIAM Conference on Applied Linear Algebra Atlanta, October 28, 2015</p> <p>Constraint Preconditioning for Coupled Fluid Flow Problems 20th Conference of the International Linear Algebra Society Leuven, July 14, 2016</p> <p>MTA: Manchester Thermal Analyzer University Booth: Design, Automation and Test in Europe 2017 Lausanne, March 27-31, 2017</p> <p>Multipreconditioned GMRES for Shifted Systems (MPGMRES-Sh) 27th Biennial Conference on Numerical Analysis Glasgow, June 28, 2017</p>
Computer Skills	<p>C/C++, CUDA Python Git/Gitlab Matlab</p>
Languages	<p>English (mother tongue) Dutch, Spanish (basic)</p>