

Adam Fidel

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- EDUCATION** **Texas A&M University**, College Station, TX, USA
Doctor of Philosophy (Ph.D.) in Computer Science Aug 2010 – Present
Cumulative GPA: 4.0 / 4.0
Advisors: Professors Nancy Amato and Lawrence Rauchwerger
Research areas: High performance computing, parallel algorithms,
parallel graph processing.
Dissertation: *Bounded Asynchrony and Nested Parallelism for Scalable Graph Processing*
- Texas Tech University**, Lubbock, TX, USA
Bachelor of Science (B.S.) in Computer Science Aug 2006 – May 2010
Summa Cum Laude
Cumulative GPA: 4.0 / 4.0
- WORK EXPERIENCE** **Google**, Mountain View, CA, USA
Software Engineer, Ph.D. Intern Sep 2015 – Dec 2015
Member of the search infrastructure team.
Designed and implemented parallel graph mining algorithms for massive scale graphs.
- RESEARCH EXPERIENCE** **Texas A&M University - Parasol Lab**, College Station, TX, USA
Research Assistant May 2010 – Present
Developer of STAPL, a parallel superset of the C++ Standard Template Library.
<http://parasol-lab.gitlab.io/stapl-home>
Advisors: Professors Nancy Amato and Lawrence Rauchwerger
- University of Massachusetts, Amherst**, Amherst, MA, USA
Undergraduate Research Assistant May 2009 – Aug 2009
Automatic compiler backend generation targeting JikesRVM.
Advisor: Professor J. Eliot B. Moss
- PEER REVIEWED PUBLICATIONS** Adam Fidel, Francisco Coral Sabido, Colton Riedel, Nancy M. Amato, Lawrence Rauchwerger, “Fast Approximate Distance Queries in Unweighted Graphs using Bounded Asynchrony,” In Wkshp. on Lang. and Comp. for Par. Comp. (LCPC), Rochester, NY, USA, September 2016.
- Best Paper Finalist.** Harshvardhan, Adam Fidel, Nancy M. Amato, Lawrence Rauchwerger, “An Algorithmic Approach to Communication Reduction in Parallel Graph Algorithms,” In Proc. Int. Conf. on Par. Arch. and Comp. Tech. (PACT), San Francisco, CA, USA, November 2015.
- Ioannis Papadopoulos, Nathan Thomas, Adam Fidel, Dielli Hoxha, Nancy M. Amato, Lawrence Rauchwerger, “Asynchronous Nested Parallelism for Dynamic Applications in Distributed Memory,” In Wkshp. on Lang. and Comp. for Par. Comp. (LCPC), Raleigh, NC, USA, September 2015.
- Ioannis Papadopoulos, Nathan Thomas, Adam Fidel, Nancy M. Amato, Lawrence Rauchwerger, “STAPL-RTS: An Application Driven Runtime System,” In *International Conference on Supercomputing (ICS)*, Newport Beach, California, USA, Jun 2015.
- Harshvardhan, Brandon West, Adam Fidel, Nancy M. Amato, Lawrence Rauchwerger, “A Hybrid Approach To Processing Big Data Graphs on Memory-Restricted Systems,” In Proc. Int. Par. and Dist. Proc. Symp. (IPDPS), Hyderabad, India, May 2015.
- Best Paper Award.** Harshvardhan, Adam Fidel, Nancy M. Amato, Lawrence Rauchwerger, “KLA: A New Algorithmic Paradigm for Parallel Graph Computations,” In Proc. Int. Conf. on Par. Arch. and Comp. Tech. (PACT), Edmonton, Alberta, Canada, Aug 2014.

Adam Fidel, Sam Ade Jacobs, Shishir Sharma, Nancy M. Amato, Lawrence Rauchwerger, “Using Load Balancing to Scalably Parallelize Sampling-Based Motion Planning Algorithms,” In Proc. Int. Par. and Dist. Proc. Symp. (IPDPS), Phoenix, Arizona, USA, May 2014.

Harshvardhan, Adam Fidel, Nancy Amato and Lawrence Rauchwerger “The STAPL Graph Library”. In Wkshp. on Lang. and Comp. for Par. Comp. (LCPC), Tokyo, Japan, Sep 2012, pp. 46-60.

Gabriel Tanase, Antal Buss, Adam Fidel, Harshvardhan, Ioannis Papadopoulos, Olga Pearce, Timmie Smith, Nathan Thomas, Xiabing Xu, Nedhal Mourad, Jeremy Vu, Mauro Bianco, Nancy M. Amato, Lawrence Rauchwerger “The STAPL Parallel Container Framework”. In Proc. ACM SIGPLAN Symp. Prin. Prac. Par. Prog. (PPoPP), Feb 2011, pp. 235-246.

Antal Buss, Adam Fidel, Harshvardhan, Timmie Smith, Gabriel Tanase, Nathan Thomas, Xiabing Xu, Mauro Bianco, Nancy M. Amato, Lawrence Rauchwerger. “The STAPL pView”. In Wkshp. on Lang. and Comp. for Par. Comp. (LCPC), Houston, Texas, Oct 2010, pp. 261-275.

OTHER

PUBLICATIONS

Adam Fidel, Nancy M. Amato, Lawrence Rauchwerger, “Bounded Asynchrony and Nested Parallelism for Scalable Graph Processing,” Doctoral Showcase at International Conference for High Performance Computing, Networking, Storage, and Analysis (SC17), Denver, Colorado, USA, November 2017.

Adam Fidel, Harshvardhan, Nancy M. Amato, Lawrence Rauchwerger, “SGL: An Approach for Future Exascale Graph Processing,” invited talk at Runtime Systems for Extreme Scale Programming Models and Architectures (RESPA), Salt Lake City, UT, USA, Nov 2016

Adam Fidel, Nancy M. Amato, Lawrence Rauchwerger, “From Petascale to the Pocket: Adaptively Scaling Parallel Programs for Mobile SoCs,” poster session presented at Int. Par. and Dist. Proc. Symp. (IPDPS) PhD Forum, Phoenix, Arizona, USA, May 2014

Adam Fidel, Sam Ade Jacobs, Shishir Sharma, Lawrence Rauchwerger, Nancy M. Amato, “Load Balancing Techniques for Scalable Parallelization of Sampling-Based Motion Planning Algorithms,” Technical Report, TR13-002 , Parasol Laboratory, Department of Computer Science, Texas A&M University, Mar 2013.

Antal Buss, Timmie Smith, Gabriel Tanase, Natham Thomas, Lena Olson, Adam Fidel, Mauro Bianco, Nancy M. Amato, Lawrence Rauchwerger “Design for interoperability in STAPL: pMatrices and linear algebra algorithms”. Technical Report TR08-003, Dept. of Computer Science, Texas A&M University, August 2008.

**TEACHING
EXPERIENCE**

Texas A&M University, College Station, TX, USA
Teaching Assistant, Spring 2017 2017 – 2017
CSCE 605 – Compiler Design (graduate)
Teaching Assistant, Spring 2012 and Spring 2013 2012 – 2013
CSCE 221 – Data Structures and Algorithms (honors section)

**HONORS
& AWARDS**

Best Paper Finalist 2015
Parallel Architectures and Compilation Techniques (PACT)
Best Paper Award 2014
Parallel Architectures and Compilation Techniques (PACT)
2nd Place of Texas A&M IAP Research Poster Contest 2014
Texas A&M University
Texas A&M Graduate Diversity Fellowship 2010–2013
Dept. of Comp. Sci. and Eng., Texas A&M University

Teaching Assistant Teaching Excellence Award 2012
 Dept. of Comp. Sci. and Eng., Texas A&M University

CRA-W/CDC Distributed Research Experiences for Undergraduates 2009
 University of Massachusetts, Amherst

Engineering Scholarship, Baker Hughes 2008
 Texas Tech University

CRA-W/CDC Distributed Research Experiences for Undergraduates 2008
 Texas A&M University

Texas Tech ACM Junior of the Year 2008

Scholarship in Computer Science, Raytheon 2007
 Texas Tech University

President's List 2006 – 2010
 Texas Tech University
 For attaining a semester GPA of 4.0.

**PEER
 REVIEWER**

SIGPLAN Conference on Principles and Practice of Parallel Programming (PPoPP)
 ACM International Conference on Supercomputing (ICS)
 ACM Programming Language Design and Implementation (PLDI)
 International Conference on Parallel Architectures and Compilation Techniques (PACT)
 IEEE International Parallel & Distributed Processing Symposium (IPDPS)
 Wkshp. on Languages and Compilers for Parallel Computing (LCPC)
 International Systems and Storage Conference (SYSTOR)
 High Performance Computing Conference (HiPC)
 Int'l Symp. on Computer Architecture and High Performance Computing (SBAC-PAD)

**PROFESSIONAL
 ACTIVITIES**

A Festschrift for Bjarne Stroustrup, College Station, TX, USA 2012
 Student Volunteer

Parallel Architectures and Compilation Techniques, Galveston Island, TX, USA 2011
 Student Volunteer

Association for Computing Machinery
 Student Member 2010 – Present

Institute of Electrical and Electronics Engineers
 Student Member 2010 – Present

SKILLS

C++ (*Boost*, *C++14*), MPI, OpenMP, Javascript (*Node*, *React*), R, Python, Fortran
<https://github.com/ledif/>
<https://gitlab.com/ledif/>

Last updated: December 12, 2017