

# 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
- HONORS & AWARDS**
- |   |             |
|---|-------------|
| Best Paper Finalist - PACT  | 2015        |
| Best Paper Award - PACT   | 2014        |
| 2 <sup>nd</sup> Place of Texas A&M IAP Research Poster Contest      | 2014        |
| Texas A&M Graduate Diversity Fellowship                             | 2010–2013   |
| Teaching Assistant Teaching Excellence Award - Texas A&M University | 2012        |
| CRA-W/CDC Distributed Research Experiences for Undergraduates       | 2009        |
| Engineering Scholarship, Baker Hughes                               | 2008        |
| CRA-W/CDC Distributed Research Experiences for Undergraduates       | 2008        |
| Texas Tech ACM Junior of the Year                                   | 2008        |
| Scholarship in Computer Science, Raytheon                           | 2007        |
| President’s List  | 2006 – 2010 |
- 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.
- 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  
CSCE 605 – Compiler Design (graduate)

2017 – 2017

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

2012 – 2013

**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

Student Volunteer 2012

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

**Association for Computing Machinery**  
Student Member 2010 – Present

**Institute of Electrical and Electronics Engineers**  
Student Member 2010 – Present

**SKILLS**

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

Last updated: May 8, 2018