

Ben Karsin
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Education

University of Hawaii at Hilo, Hilo, HI

B.S. in Computer Science

Graduated May, 2006

Minor: Mathematics

GPA: 3.48

Honors: Acquired Database Management Certificate.

University of Hawaii at Manoa, Honolulu, HI

M.S. in Information and Computer Science

Graduated May, 2012

Research Area: High Performance Computing

Thesis: Parallel Xpath Query Evaluation on Multi-core Processor

Advisors: Dr. Lipyew Lim and Dr. Henri Casanova

University of Hawaii at Manoa, Honolulu, HI

PhD in Information and Computer Science

Graduate May, 2017

Research Area: Parallel Algorithms and High Performance Computing

Advisor: Dr. Nodari Sitchinava

PhD Qualifying Exam Score: 89%

Literature Review Topic: The Parallel Fast Fourier Transform

Related Experience

University of Hawaii at Manoa

Research Assistant

Jan 2016 - Present

Perform research on parallel algorithms design and analysis with a focus on GPU-efficiency. Collaborate with other researchers and, thus far, have one publication relating to computational geometry. Current work continues on problems of fundamental algorithm design as well as developing, analyzing, and testing performance models for Graphics Processing Units.

University of Hawaii at Manoa ITS Department

Graduate Assistant

April 2011 - Dec 2015

Worked on many tasks including designing and implementing a metadata management system called DCmd using Grails, Groovy, Java, Javascript, CSS, and others. More information on DCmd available at:
<http://benkarsin.wordpress.com/dcmd/>

University of Hawaii at Manoa ITS Department

Student Programmer

Oct 2008 - April 2011

Student Programmer Position focused on a designing and implementing a data collection and visualization project utilizing Cacti and uPortal technologies. Extended to subsequent Graduate Assistant position.

Publications

1. Efficient Batched Predecessor Search in Shared Memory on GPUs, B. Karsin, H. Casanova, N. Sitchinava, In Proc. of HiPC, **2015**
2. An Efficient Algorithm for the 1D Total Visibility-Index Problem, P. Afshani, H. Casanova, M. de Berg, B. Karsin, C. Lambrechts, N. Sitchinava, C. Tsirgiannis, In Proc. of ALENEX, **2017**

Technical Papers

1. Low-latency Xpath Query Evaluation on Multi-Core Processors, B. Karsin, H. Casanova, L. Lim, Available online at <https://benkarsin.files.wordpress.com/2014/01/xpath-paper1.pdf>, **2014**

Relevant Projects and Experiences

- Designed and Implemented the DCmd metadata application. DCmd currently provides the University of Hawaii ITS department with a centralized metadata repository for planning and tracking resources and personnel. Project is continually expanding in scope and is available as an open-source project on Github, **2012-present**
- Designed and Implemented SITAR, an open-source application to collect, monitor, and visualize statistical data for the ITS datacenter at University of Hawaii. Included several data collection methods, graphic visualizations, and a portal-based front-end, **2011**
- Contributed to the Cracklib open-source library with a solution to an issue resulting in excessive rejections when using long password-lengths, **2011**
- Developed a heterogeneous Beowulf cluster for the graduate high performance computer course at UH Manoa, **2007**
- Participated in the 2005 Association for Computing Machinery (ACM) International Collegiate Programming Contest (ICPC), **2005**

Spoken Languages

- English - native language
- French - speak fluently