J. HOLLY DEBLOIS

PERSONAL INFORMATION

email hdeblois@gmail.com

website https://www.cs.umb.edu/~hdeblois.

CAREER SUMMARY

Solves Tough Problems

COMPUTER SCIENTIST skilled in Algorithm design/Parallel Processing/Computational Geometry, Data Science, Sensor Networks, Agile Methodologies/Design Patterns; SOFTWARE ENGINEER/TEAM LEADER in private industry and on defense contracts.

EDUCATION

PhD *Dec. 2019* University of Massachusetts Boston, Computer Science

MS *1976* Harvard University, Applied Mathematics

BA *1970* Smith College, Comparative Government

RESEARCH EXPERIENCE

2020-Present Technical Tasks

Consultant

Rehosted website to cloud. Produced a video on infinities. Rehosted the graphics for an article to meet enhanced production specifications.

2016-2019 Parallel Processing/OMP and CUDA

High Performance Computing Lab

Thesis: Developed a faster algorithm for Data Depth, used by statisticians. Enhanced performance by rehosting and parallelizing. Prior to that, developed a convolutional network for deep learning. Also, developed a scene classifier for GPU using CUDA and C. Advisor: Prof. Ming OUYANG.

2014-2016 Sensor Networks Research

Networking Lab

Designed and implemented low-level wireless protocols. Supervisor: Prof. Duc TRAN.

2012-2014 Design Patterns/Threads/Algorithms

Software Engineering

Designed and implemented an inbody communication system. As team leader, using agile design methodology, designed and implemented a molecular communication network. Supervisor: Prof. Junichi SUZUKI.

Retranslated Archimedes iterative algorithm from Greek. Supervisor: Carl OFFNER.

GRADUATE SCHOOL EMPLOYMENT

Teaching Assistant *2008-2019* UMass CS Dept.: Taught C, java, intro cs, and ethics in computing.

Lead Operator *2008-2017* UMass CS UNIX-PC Lab: Monitored performance, trained operators.

PREVIOUS EMPLOYMENT

2000-2003 AXIAM, INCORPORATED, — Gloucester MA

Director of Software

Customized PCs and installed software product. Designed and implemented code for metrology products measuring jet aircraft engine parts. Advised legal team regarding software for patents. Supported field engineers. Supervisor: Donald LOHIN.

1999-2000 AT&T, INC., — Herndon VA

Production Spt. Programmer

Under contract to IBM, Inc., ran JCL and COBOL high-end billing software jobs 24x7 on MVS/IBM mainframes, computing phone bills for Fortune 500 companies. Modeled input flows to speed backout of erroneous input data. Corrected corporate disaster recovery test procedures to allow stored data tapes, simulating data-driven software.

PUBLICATIONS AND PATENTS

DeBlois, J. Holly, "Parallel Computation of Bivariate Point Data Depths and Display of Intrinsic Depth Segments", *STAT Wiley Online Library*, Published online: 19 June 2020, https://doi.org/10.1002/sta4.250.

DeBlois, Jane Holly, "Parallel Computation of Bivariate Point Data Depths and Display of Intrinsic Depth Segments" (2019). *Graduate Doctoral Dissertations.* 527. https://scholarworks.umb.edu/doctoral_dissertations/527/.

Suzuki, Junichi, H. Budiman, T. Carr, J.H. DeBlois, "A Simulation Framework for Neuron-Based Molecular Communication", *Procedia Computer Science*, 2013, 24: 103 – 113.

DeBlois, J.H., H. Budiman, D. Wang, T. Carr, A. Varma, P. Jain, Posterboard, "Nanonetworks Signal System for Neuron-Based Molecular Communication", GE Global Research Center, 2013.

DeBlois, J.H., 2011, *"Rotor assembly system and method"*, US Patent #7,979,233.

DeBlois, J.H. and Lee, R.M., *"Rotor assembly system and method"*, 2010, US Patent #7,739,072.

DeBlois, J.H. and Lee, R.M., *"Rotor assembly system and method"*, 2005, US Patent #6,898,547.

Malliaris, A.C., DeBlois, J.H., "Overstated safety belt use rates – evidence, consequences, and remedies", *SAE Transactions*, 1998, 758-772.

Malliaris, A.C., K.H. Digges, J.H. DeBlois, "Relationships between crash casualties and crash attributes", *SAE Transactions*, 1997, 576-587.

Malliaris, A.C., J.H. DeBlois, K.H. Digges, "Light vehicle occupant ejections – a comprehensive investigation", *Accident Analysis & Prevention 28 (1)*, 1996, 1-14.

Malliaris, A.C., J.H. DeBlois, K.H. Digges, "Air bag field performance and injury patterns", *SAE Transactions*, 1996, 751-774.

Malliaris, A.C., K.H. Digges, J.H. DeBlois, "Injury patterns of car occupants under air bag deployment", *SAE Technical Paper 957869*, 1995.

Malliaris, A.C., K.H. Digges, J.H. DeBlois, "Evaluation of air bag field performance", *SAE Transactions*, 1995, 1513-1534.

Malliaris, A.C., J.H. DeBlois, "Pivotal characterization of car rollovers", *Proceedings: International Technical Conference on the Enhanced Safety of Vehicles*, 1993, 721-728.

COMPUTER SKILLS

Advanced — C/C++, R, OMP, JAVA, CUDA, XML, Linux, algorithms, computational geometry, object-oriented design, agile design methodologies

Intermediate — PYTHON, PERL, TCP/IP, COBOL, JCL, FORTRAN, ADA, HTML, LaTeX, graphics, classifiers, computer vision, design patterns, sensor networks, theory of computation, SQL, Microsoft Windows

Basic — Computer hardware, Apache2, cloud computing

OTHER INFORMATION

Honors and Awards

2013 · Honorable Mention, GE Global Research Center Student Symposium
2000 · Commendation for Disaster Recovery Test Improvement, AT&T, Inc.
1985 · Commendation for Excellence on Test Completion, The BDM Corp.

Community and Outreach

2017 · Oral Presentation on the Internet at the Black Girls Code Camp.
2012-2013 · Slideshow, the Internet, at UMass Boston Summer Camp Day.

Languages

ENGLISH · Native speaker
FRENCH · Intermediate (conversationally fluent)
MANDARIN · Basic (simple words and phrases only)

OTHER EDUCATION

1998-1999 Chubb Computer Services, COBOL — Herndon, VA
1982 The BDM Corp., artificial intelligence – McLean, VA

1981-1982	George Washington University, economics – Washington, D.C.
1973-1974	MIT, computer science and math – Cambridge, MA
1970-1971	Boston University, physics – Boston, MA

PRIOR EMPLOYMENT

1990-1998	Data Link, Inc. – Washington, D.C.
1982-1990	The BDM Corporation – McLean, VA
1976-1977	US Department of Transportation – Cambridge, MA
1970-1973	Mass. Eye and Ear Infirmary, Research Assistant – Boston, MA

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