

# Doina Bein

7575 Frankford Road #3222  
Dallas, TX 75252  
(972) 519-0965

siona@utdallas.edu  
www.utdallas.edu/~siona  
US citizen

## Education

- 08/2001 - 05/2006 Ph.D. in Computer Science; University of Nevada, Las Vegas, USA, GPA 4.0  
08/1999 - 08/2001 Master of Science in Computer Science; University of Nevada, Las Vegas, USA,  
GPA 4.0  
10/1996 - 09/1997 Master of Science in Computer Science; Al. I. Cuza University, Iasi, Romania,  
GPA 3.70  
10/1991 - 05/1996 Bachelor of Science in Computer Science; Al. I. Cuza University, Iasi, Romania,  
GPA 3.88

## Work Experience

- 01/2007-present Research Associate, University of Texas at Dallas, Department of Computer Science
- 08/2006-11/2006 Visiting Scholar, Osaka University, Japan
- 01/2003 - 05/2006 Teaching Assistant, University of Nevada, Las Vegas, School of Computer Science
- Instructor for CSC 119, C for Scientist (Summer 2003, Summer 2004)
  - Instructor for CSC 115, Introduction to Computers (Summer 2004)
  - TA for Automata and Formal Languages (Spring & Fall 2003, Spring & Fall 2004, Spring & Fall 2005, Spring 2006)
  - TA for Introduction to Data Structures (Spring 2003)
- 01/2002 - 12/2002 Research Assistant, University of Nevada, Las Vegas, School of Computer Science
- Conducted research in web programming, Internet forensics & security
  - Leading designer & software programmer for an FBI project (grant)
- 08/1999 - 12/2001 Teaching Assistant, University of Nevada, Las Vegas, School of Computer Science
- Instructor for Automata and Formal Languages (Fall 2001)
  - TA for Analysis of Algorithms (Spring 2001)
  - Lab Instructor for Computer Science I (Fall 1999, Spring 2000)
  - TA for Automata and Formal Languages (Fall 1999, Spring & Fall 2000, Spring 2001)
  - TA for Introduction to Data Structures (Fall 2000)
- 04/1997 - 08/1997 Research Assistant, Aix-Marseille University, Marseille, France, Computer Science Department
- TEMPUS scholarship recipient
  - Worked with Prof. Dr. Traian Muntean in distributed systems, parallel algorithms, and Java Virtual Machine
- 09/1996 - 06/1999 Computer Science Teacher, Tehnoton High School, Iasi, Romania
- Full time, tenured
  - Tutored students, proofread for regional competitions in software programming and Computer Science section of the high school final exam
- 09/1995 - 06/1996 Computer Science Teacher, Gh. Asachi High School, Iasi, Romania
- 01/1995 - 06/1995 Computer Science Teacher, Anghel Saligny High School, Iasi, Romania
- Part time
  - Tutored students

Honors

- 41st Hawaii International Conference in System Sciences (HICSS 2008), Best Paper Award, Software Technology track
- Member of SIAM (January 2006-present)
- Member of IEEE Society (February 2005-present)
- Recipient of Great Assistantship Award (Summer 2005, Summer 2001)
- Recipient of Summer Scholarship (Summer 2004)
- National Dean's List (Inductee 2003)
- Phi Kappa Phi, Chapter 100 (Inductee 2001)
- TEMPUS Scholarship (04/1997 - 08/1997)

Refereed Journal Articles

- D. Bein, A.K. Datta, and S. Yellenki, "Cluster-Based Route Discovery Protocol", *Scalable Computing: Practice and Experience Journal*, Special issue on Distributed Intelligent Systems, vol. 9, no. 1, pp. 21-28, March 2008.
- D. Bein, A.K. Datta, and M.H. Karaata, "An Optimal Snap-Stabilizing Multi-Wave Algorithm", *Computer Journal*, vol. 50, no. 3, pp. 332-340, Oxford University Press for British Computer Society, 2007.
- D. Bein, A.K. Datta, and V. Villain, "Self-Stabilizing Local Routing in Ad Hoc Networks", *Computer Journal*, vol. 50, no. 2, pp. 197-203, Oxford University Press for British Computer Society, 2007.
- D. Bein, V. Jolly, B. Kumar, and S. Latifi, "Reliability Modeling in Wireless Sensor Networks", *International Journal of Information Technology*, vol. 11, no. 2, pp. 1-8, 2005.
- D. Bein, W. W. Bein, N. Brajkovska and S. Latifi, "Optimal Embedding of Honeycomb Networks into Hypercubes", *Parallel Processing Letters*, vol. 14, no. 3 & 4, September-December 2004, pages 367-375.

Articles in Refereed Conference Proceedings

- Y. Yamauchi, T. Masuzawa, and D. Bein, "Ring embedding preserving the fault-containment" (conference paper), *Proceedings of the 7th International Conference on Applications and Principles of Information Science (APIS 2008)*, pp. 43-46.
- D. Bein, "Fault-tolerant k-fold Pivot Routing in Wireless Sensor Networks", *Proceedings of the 41st Hawaii International Conference in System Sciences (HICSS 2008)*, IEEE Computer Press, pp. 245, **Best Paper Award, Software Technology track**.
- D. Bein, W.W. Bein, Z. Meng, L. Morales, C. Shields Jr., and H. I. Sudborough, "Clustering and the byclique partition problem", *Proceedings of HICSS 2008*, pp. 235.
- D. Bein, W.W. Bein, and K. Adusumilli, "A Genetic Algorithm for the Two Machine Flow Shop Problem", *Proceedings of HICSS 2008*, IEEE Computer Press, pp. 33.
- D. Bein, A.K. Datta, and S. Yellenki, "Cluster-Based Route Discovery Protocol", *First International Symposium on Intelligent and Distributed Computing (IDC 2007)*, Springer Verlag, Studies in Computational Intelligence, 2007, vol. 78, pp. 53-62.
- D. Bein, A.K. Datta, and L.L. Larmore, "On Self-Stabilizing Search Trees", full paper, *20th International Symposium on Distributed Computing (DISC 2006)*, Lecture Notes in Computer Science, vol. 4167, pp. 76-89.

- D. Bein, A.K. Datta, and L.L. Larmore, “Self-Stabilizing Space Optimal Synchronization Algorithms on Trees”, *13th Colloquium on Structural Information and Communication Complexity (SIROCCO 2006)*, pp. 334-348.
- D. Bein, A.K. Datta, and V. Villain, “Self-Stabilizing Pivot Interval Routing in General Networks”, *International Symposium on Parallel Architectures, Algorithms, and Networks (ISPAN 2005)*, pp. 282-287.
- D. Bein, A.K. Datta, C. Jagganagari, and V. Villain, “A Self-stabilizing Link-Cluster Algorithm in Mobile Ad Hoc Networks”, *International Symposium on Parallel Architectures, Algorithms, and Networks (ISPAN 2005)*, pp. 436-441.
- D. Bein, A.K. Datta, and V. Villain, “Snap-stabilizing Optimal Binary Search Tree”, *Seventh International Symposium on Self Stabilizing Systems (SSS 2005)*, pp. 1-17.
- D. Bein, A.K. Datta, and V. Villain, “Self-stabilizing optimal local routing in ad hoc networks”, *Third International Workshop on Mobile and Distributed Systems (MDC 2005)*, Proceedings of the ICDCSW 2005, vol. 6, pp. 564-570.
- D. Bein, A.K. Datta, M.H. Karaata, and S. Zaman, “An Optimal Snap-Stabilizing Multi-Wave Algorithm”, *Fourth International Workshop on Assurance in Distributed Systems and Networks (ADSN 2005)*, Proceedings of ICDCSW 2005, vol. 6, pp. 35-41.
- D. Bein, A.K. Datta, M.H. Karaata, and S. Zaman, “Snap-Stabilizing k-Wave Synchronizer for Rooted Tree”, *International Conference on Computational Science 2005 (ICCS 2005)*, vol. 1, pp. 560-567.
- D. Bein, W.W. Bein, and S. Malladi, “Fault Tolerant Coverage Model for Sensor Networks”, *International Conference on Computational Science 2005 (ICCS 2005)*, vol. 2, pp. 535-542.
- D. Bein and A.K. Datta, “A Self-Stabilizing Directed Diffusion Protocol for Sensor Networks”, *Mobile and Wireless Networks Workshop (MWN 2004)* Montreal, Proceedings of the 2004 ICPP Workshops, IEEE Computer Society, pp. 69-76.
- D. Bein, B. Kumar, V. Jolly, and S. Latifi, “On Reliability Concerns in Wireless Sensor Networks”, *International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA 2004)*, vol. 3, pp. 1043-1048.
- D. Bein and A.K. Datta, “Self-Stabilizing Directed Diffusion Protocol in Sensor Networks”, *International Conference on Computational Science (ICCS 2004)*, Lecture Notes in Computer Science (LNCS) 3039, Springer-Verlag, pp. 1233-1240.
- D. Bein, N. Brajkovska, and S. Latifi, “Embedding of Honeycomb Mesh Networks into Hypercubes”, *International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA 2003)*, pp. 871-876.
- D. Bein, A.K. Datta, and V. Villain, “Self-Stabilizing Routing Protocol for General Networks”, *2nd Annual International Conference on Networking in Education and Research (RoEduNet 2003)*, pp. 15-22.

#### Survey Papers (Refereed Conference Proceedings)

- D. Bein, V. Jolly, and L. Morales, “Location Management and Cost Planning for Personal Communication Systems”, *Fourth IFAC Conference on Management and Control of Production and Logistics (MCPL 2007)*, IFAC, pp. 683-688, ISBN 978-973-739-481-1.
- D. Bein, W.W. Bein, M. Brut, and A.M. Cazacu, “Why is hard to patent an invention”, *Eighth International Conference on Informatics in Economy (ICIE 2007)*, ASE Printing House, pp. 133-138, ISBN 978-973-594-921-1.
- D. Bein, W.W. Bein, V. Jolly, and S. Latifi, “Web Spoofing and phishing attacks on the Internet”, *Proceedings of the 5th RoEduNet IEEE International Conference*, Remus Brad (Ed.), L. Blaga University Press, 2006, pp. 106-109, ISBN (10) 973-739-277-9.

- V. Jolly and D. Bein, “Optical Network Evolution - SONET & DWDM”, *Proceedings of the 5th RoEduNet IEEE International Conference*, Remus Brad (Ed.), L. Blaga University Press, 2006, pp. 162-165, ISBN (10) 973-739-277-9.
- D. Bein, A.K. Datta, V. Jolly, and S. Latifi, “Bluetooth, the Tool for a Seamless Internet?”, *3rd Annual International Conference on Networking in Education and Research (RoEduNet 2004)*, Transactions on Automatic Control and Computer Science, volume 49(63), pp. 15-28.
- D. Bein, W.W. Bein, V. Jolly, and S. Latifi, “Privacy and Security on Internet: Virtual Private Networks”, *3rd Annual International Conference on Networking in Education and Research (RoEduNet 2004)*, Transactions on Automatic Control and Computer Science, volume 49(63), pp. 39-42.
- D. Bein and A. K. Datta, “Anonymators: Privacy and Security on the Internet”, *2nd Annual International Conference on Networking in Education and Research (RoEduNet 2003)*, pp. 10-14.

#### Conference Articles Accepted (In print)

- D. Bein, “Self-configuring, self-organizing, and self-healing schemes in MANETs” (book chapter), for *Handbook of Wireless Ad Hoc and Sensor Networks*, Sudip Misra, Isaac Woungang, and Subhas C. Misra (Editors), to be published by Springer-Verlag (London) by the end of 2008, accepted.
- D. Bein, “Self-organizing and self-healing schemes in WSNs” (book chapter), for *Handbook of Wireless Ad Hoc and Sensor Networks*, Sudip Misra, Isaac Woungang, and Subhas C. Misra (Editors), to be published by Springer-Verlag (London) by the end of 2008, accepted.
- D. Bein and S. Q. Zheng, “An effective algorithm for computing energy-efficient broadcasting trees in all-wireless networks” (conference paper), *Workshop on Wireless Ad Hoc and Sensor Networks (WWASN) 2008*, co-located with ICDCS 2008.
- D. Bein, A. K. Datta, and L. L. Larmore, “Self-stabilizing algorithms for sorting and heapification” (conference paper), *IEEE International Parallel & Distributed Processing Symposium (IPDPS) 2008*.

#### Submitted Journal and Conference Articles

- Y. Yamauchi, T. Masuzawa, and D. Bein, “Preserving the Fault-Containment of Ring Protocols Executed on Trees” (journal paper), *British Computer Journal*, submitted Dec. 2007.
- D. Bein, H. Kakugawa, and T. Masuzawa, “Convergence Time of Self-Stabilizing Protocols with Faults (journal paper)”, *Journal of Computer and System Sciences (JCSS)*, submitted August 2007.
- D. Bein, W. W. Bein, S. Malladi, Fault Tolerant Coverage Models for Sensor Networks (journal paper), *International Journal of Sensor Networks (IJSNet)*, submitted April 2007.

#### Projects

- *Anonymator* - a third party program acting as a middleman between the user and the web site; project for an FBI grant
- *Anon* - collects all the packets from a given port number of a host machine, and extracts essential data; project for an FBI grant
- *Environments Developed for Economical Forecasting* - project written in Borland C++; project for BS in CS degree, Al. I. Cuza University, Iasi, Romania, internal use
- *Parallel Version of a Sequential Algorithm for Solving Inequalities* - project for TEMPUS scholarship, Aix-Marseille University, internal use.

Conferences - Program Committee Member

- International Workshop on Mobility, Algorithms, Graph Theory in Dynamic Networks (IMAGINE) 2008
- Hawaii International Conference in System Sciences (HICSS 2008), Algorithmic Challenges in Emerging Applications of Computing, minitrack of Software Technology track
- Symposium On Applied Computing (SAC 2008), Middleware Engineering track
- International Workshop on Intelligent Pervasive Middleware (IPM 2007)
- Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS) 2007
- Workshop on Reliability, Availability, and Security (WRAS) 2007
- Richard Tapia Celebration of Diversity in Computing Conference (TAPIA) 2007

Conference Participation

- Finance and Registration chair for International Symposium on Parallel Architecture and Networks (ISpan 2005), Las Vegas, NV
- Session Chair for session 6B - Ad hoc and Sensor Networks at ISpan 2005, Las Vegas, NV
- Session Chair for session M10 - Networks and Distributed Algorithms at ICCS 2005 (International Conference on Computational Science), Atlanta, GA
- Plenary speaker at International Workshop on Mobility, Algorithms, Graph Theory in Dynamic Networks (IMAGINE) 2007
- Invited speaker at the First Canadian Discrete and Algorithmic Mathematics Conference (CanaDAM 2007), Games on Graphs track
- Participated and presented full-length papers at RoEduNet 2003, ICCS 2004, RoEduNet 2004, MWN 2004, ICCS 2005, MDC 2005, ADSN 2005, SSS 2005, ISpan 2005, SIROCCO 2006, DISC 2006, SSS 2006, MCPL 2007, IDC 2007, ACG 2007, HICSS 2008.

Paper Reviewer for Conferences and Journals

- Computer Communications (CompCom) 2008
- Transactions on Autonomous and Adaptive Systems (TAAS) 2007
- Discrete Applied Mathematics (DAM) 2007
- International Symposium on Parallel Architecture and Networks (ISpan) 2008
- 11th International Conference On Principles Of Distributed Systems (OPODIS) 2007
- Symposium on Self-Stabilizing Systems (SSS) 2007 and Workshop on Reliability, Availability, and Security (WRAS) 2007
- Richard Tapia Celebration of Diversity in Computing Conference (TAPIA) 2007
- Computer Communications (CompCom) 2007
- Symposium on Self-Stabilizing Systems (SSS) 2006
- IEEE International Parallel and Distributed Processing Symposium (IPDPS) 2006
- Symposium on Self-Stabilizing Systems (SSS) 2005
- International Conference on Distributed Computing and Internet Technology (ICDCIT) 2005
- International Conference on High Performance Computing (HiPC) 2005

- Mobile and Distributed Computing Workshop (MDC) 2005
- Information and Knowledge Engineering (IKE) 2003
- Journal of Parallel and Distributed Computing (JPDC), vol. 62, issue 5 (May 2002), Special Issue on Self-Stabilizing Distributed Systems.

#### University Service

- GPSA representative of Computer Science Department, 09/2002 - 05/2006. Major accomplishments: Initiate and obtain wireless access in GPSA lounge in the Lied library, initiate and obtain wireless access outside TBE (Engineering) building.
- STAB member (Student Technology Advisory Board), 09/2003 - 05/2006.
- ITCC member (Information Technology Coordination Committee), 11/2004 - 05/2006. Major accomplishments: participate in developing the email policy for the RAVE (campus email system), participate in developing the administrator and users policies for the computers in the public labs.