

Joe Sventek

Date: 27 February 2017

To: Office of the Governor, Executive Appointments

Subject: Statement of Interest for the Faculty Trustee position on the UO Board of Trustees

I am interested in being appointed to the Faculty Trustee position on the UO Board of Trustees when it becomes vacant on 1 July 2017. I have completed and attach the Interest Form; I also include my latest curriculum vitae (CV) and a biography of relevant milestones in my career.

As you will see from my bio and CV, I have held several leadership positions, both in industry and academia, throughout my career. I have managed sizeable budgets in different capacities, and have been a conscientious steward of those funds, both for my unit and for my employer.

More importantly, I have been entrusted with leadership of several interdisciplinary groups (and one inter-company group) exploring new strategic directions, again both in industry and academia. I have led such groups effectively, enabling each group member to communicate their opinions while continuing to steer the group to a successful conclusion. The recent specification, acquisition, and operationalization of the new high-performance computing facility at the UO is one of the most recent examples of such efforts. I have also successfully created a new company to produce products based upon research in my unit, thus creating jobs and tax revenue in the state of California. This startup company, TimesTen Performance Software, was acquired by Oracle for ~\$500M in 2005.

I should note that a university such as the UO has two key “products”: world-leading research results and well-educated student citizens; it is incumbent on the faculty, staff, and the board to support research and teaching excellence, as well as offering students an affordable educational experience that leads to successful graduation and the ability to find employment in their chosen field as a contributing member of society; of course, this must be achieved while demonstrating fiscal prudence. As a practicing member of the UO faculty working on these key “products”, I look forward to working with the rest of the board members to achieve these goals.

In the state of Oregon, it is important that the whole be greater than the sum of its parts. I have previous experience in coordinating activities at the three largest Scottish Universities (Glasgow, Edinburgh, St. Andrews) to create the Scottish Informatics and Computer Science Alliance (SICSA); SICSA was a multi-year collaboration, funded to the tune of \$7.5M/annum for five years. SICSA was funded to enable Scottish universities to focus on bleeding-edge research in three emerging areas: I personally led the interdisciplinary activity in Next Generation Networking. This experience has given me insight into ways in which a successful collaboration can be established and operated. Such insight will prove valuable in board discussions regarding interactions among universities in Oregon.

Finally, all through my career I have tried to benefit my unit while contributing to the success of the overarching enterprise. From my leadership positions in academia, I have an excellent understanding of the strategic challenges facing a university, in general, and the University of Oregon, in particular. I have applied this understanding to the HPC project and my involvement as a member of the interim IS leadership team, over and above my normal duties as Professor and Head of Department. I hope you can see that UO’s success is very important to me. If I have the opportunity, I will bring all my skills and energy to being an effective trustee as well as being able to represent the UO faculty in board deliberations.

Please do not hesitate to contact me if you require any additional information regarding my self nomination for the board position.



Prof Joseph S Sventek
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Bio for Joseph S. Sventek

Education

- Graduated as valedictorian from Sherman Central High School, Sherman, NY, June 1969.
- Graduated *cum laude* with a BA in Mathematics from the University of Rochester, Rochester, NY, in June 1973. Attended the U of R on a Bausch & Lomb Science Scholarship, as well as a New York State Regents Scholarship.
- Graduated with a PhD in Nuclear Chemistry from the University of California, Berkeley, in December 1979.
- Google Scholar lifetime h-index of 25, since 2012 h-index of 14.

Employment

- January 1980-May 1986: Research Computer Scientist, Lawrence Berkeley National Laboratory, Berkeley, CA.
- June 1986-July 1990: Deputy Chief Architect, ANSA Project, Cambridge, England.
- August 1990-March 1994: Chief Architect, Distributed Computing Program, Hewlett-Packard Company, Cupertino, CA.
- April 1994 – September 1999: Laboratory Scientist for Distributed Computing, Hewlett-Packard Research Laboratories, Palo Alto, CA.
- September 1999 – November 2002: Director, Agilent Laboratories Scotland, Edinburgh, Scotland.
- December 2002 – August 2014: Professor of Communication Systems, School of Computing Science, University of Glasgow, Glasgow, Scotland.
- August 2010 – July 2014: Head of School, University of Glasgow, Glasgow, Scotland.
- September 2014 – present: Professor and Head of Department of Computer and Information Science, University of Oregon, Eugene, OR.

Leadership Activities

- Project leader at LBNL, 1980-1986, managing ~\$250k/annum from USDOE, 1982-1986.
- Deputy chief architect, ANSA Project, 1986-1990. No financial management, but provided technical leadership for all implementation activities within the project.
- Lead architect, HP Distributed Computing Program, 1992-1994. Managed HP's collaboration with Sun Microsystems in submissions to the Object Management Group; provided technical leadership to HP engineers involved in the collaboration.
- Department manager, HP Labs, 1994-1999. Managed 3 project teams, annual budget of ~\$5M.
 - Led several cross-business unit architectural efforts during this time. Two of these activities led to major positive changes in major businesses.
 - Spun out TimesTen Performance Software, based upon research in my department, in 1998, and served on the board 1998-2000. Oracle acquired the company for ~\$500M in 2005.
- Software Technology Lab director, HP Labs, 1999. Oversaw a budget of ~\$13M/annum, managed the three departments after the abrupt departure of my predecessor. This occurred after

plans were already in place for me to relocate to Scotland to start Agilent Laboratories Scotland; thus held both posts, spending alternate 2-week periods in Palo Alto and Edinburgh.

- Director, Agilent Labs Scotland, 1999-2002. Targeted to grow the staff from 0 to 20 in 3 years. Growth plans halted when tech bubble burst in Spring 2001. Managed a budget of £1.5M/annum when I moved to the University of Glasgow.
- Professor at Glasgow, 2002-2014 – obtained and managed £1.86M/\$2.98M of peer-reviewed external research funds; many of the grants were collaborative with other universities in Britain, with a total funding of £5.425M/\$8.68M. Managed all Glasgow funding and technical activities.
- Glasgow PI on Scottish Informatics and Computer Science Alliance, 2009-2014 – SICSA was a multi-year collaboration between the computer science/informatics schools at Glasgow, Edinburgh, and St Andrews Universities in Scotland; it was funded to the tune of \$7.5M/annum for 5 years, with the funding used for new tenure-track posts, PhD studentships, and funding for workshops and conferences; this was to enable Scottish universities to focus on bleeding-edge research in three emerging areas; I personally led the interdisciplinary activity in Next Generation Networking.
- Head of School at Glasgow 2010-2014. Grew the faculty by 25% during that time. Leveraged available funding to enable the School to rank in the top 10 computer science departments in the UK and top 100 in the world.
- While Head of School at Glasgow, initiated delivery of the Glasgow Honours degree in Computing Science in Singapore with the collaboration of the Singapore Institute of Technology. Hired faculty in Singapore, established the facilities and IT infrastructure, and saw the 1st cohort through their first year (before taking up my position at UO).
- Head of Department at Oregon since arriving in September 2014. Am on a mission to grow the department by 33% by 2020, as well as to grow the size and quality of our PhD program.
- Have been a member of the CAS Dean's "Wise Heads" group since arriving at UO. Even though the typical tenure for such membership is for 2 years, Dean Marcus explicitly requested that I continue on through this academic year.
- Brad Shelton asked me in November 2015 to convene and direct a committee of faculty and staff to specify, acquire, and stand up a new High-Performance Computer facility at UO. Even though such an activity usually takes in excess of 2 years, under my guidance we were able to complete the specification by May 2016, have all of the equipment arrive on campus by September 2016, and have the system up and running acceptance tests by November 2016. I was a member of the search committee for the Director of the new facility, and he has been in place since 1 December 2016. We are just now engaging alpha testers to shake down the management and control software.
- When Melissa Woo resigned as CIO in February 2016, I was asked to join the interim leadership team for IS, focusing on infrastructure. Under my leadership, we are currently finishing up the installation of redundant 100 gbit/sec switching across campus, and installing 10 gbit/sec edge switches to enable high-speed network access between the HPC and the departments that will use the HPC. The edge switch installation will continue through coming years to bring the entire campus into the 21st century with respect to networking capability.
- In March 2016, I was invited to become involved in the discussions that led to the Knight Campus for Translational and Applied Science. I remain a member of the internal advisory board.

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Birth date: 29 January 1952

Birth place: Corry, PA, USA

Nationality: USA

Family: Married, December 1975, to Virginia A. Tucker
One son, J. Gabriel Sventek, born 21 January 1977

Education

- *Ph.D. Chemistry, University of California, December 1979; dissertation: "A Non-equilibrium Statistical Mechanical Approach to Heavy-ion Reactions"; supervisor: Prof LG Moretto*
- *B.A. Mathematics, cum laude, University of Rochester, June 1973*

Employment

- *September 2014 – present: Head of Department of Computer and Information Science, University of Oregon, Eugene, OR*
- *September 2014 – present: tenured Full Professor, Department of Computer and Information Science, University of Oregon, Eugene, OR*
- *August 2010 – July 2014: Head of School of Computing Science, University of Glasgow, Glasgow, Scotland*
- *December 2002 – August 2014: Professor of Communication Systems, School of Computing Science, University of Glasgow, Glasgow, Scotland*
- *September 1999 - November 2002: Director, Agilent Laboratories Scotland, Edinburgh, Scotland*
- *April 1994 - September 1999: Laboratory Scientist for Distributed Computing, Hewlett-Packard Research Laboratories, Palo Alto, CA*
- *August 1990 - March 1994: Chief Architect, Distributed Computing Program, Hewlett-Packard Company, Cupertino, CA*
- *June 1986 - July 1990: Deputy Chief Architect, ANSA Project, Cambridge, England*
- *January 1980 - May 1986: Research Computer Scientist, Lawrence Berkeley Laboratory, Berkeley, CA*

Honours

- *Chair of the UK Computer Research Committee, November 2012 – July 2014.*
- *Appointed member of the Computer Science and Informatics sub-panel for the 2014 Research Excellence Framework.*
- *Elected member of the UK Computer Research Committee executive committee, September 2009.*
- *Elected fellow of the British Computer Society, February 2008.*
- *Keynote speaker at the Distributed Event-Based Systems Conference, June 2007.*
- *Elected fellow of the Institution of Engineering and Technology, August 2006.*
- *Elected fellow of the Royal Society of Edinburgh, March 2006.*
- *Elected senior member of the Institute of Electrical and Electronics Engineers.*
- *Keynote speaker at the International Workshop on Adaptive and Self-managed Enterprise Applications, June 2005 – “Self-Managed Cells and their Federation”.*
- *Appointed to the Computer Science and Informatics RAE sub-panel for the 2008 Research Assessment Exercise.*
- *Elected to the UK Computing Research Committee, February 2004*
- *Keynote speaker at the International Workshop for Quality of Service, June 2001 - “Automated, Dynamic Traffic Engineering in Multi-Service IP Networks”.*
- *Keynote speaker at the Middleware ‘98 Conference - “An ORB Framework: Customizable Middleware for the Discerning System Developer”.*
- *Invited expert speaker to the Workshop on Software for the Large Hadron Collider, Barcelona, March 1997.*
- *Lifetime Achievement Award (for my work in the Virtual Operating System effort described below) from the USENIX Association, January 1997.*
- *Invited speaker at a meeting of the ARPA task force on survivable systems.*
- *Invited speaker at the Nomadic ‘96 Conference, San Jose, CA, June 1996.*
- *Keynote speaker on “Distributed Object Management” at the Research in Data Engineering 1995 Workshop, Taipei, Taiwan.*
- *Invited speaker at the ANSA Works 1995 Conference, Cambridge, UK.*
- *Invited lecturer at the University of Newcastle upon Tyne’s Educators’ Symposium, September 1994.*
- *Recipient of Best Paper Award, NBS Computer Networking Symposium, December 1983*
- *Elected to Phi Beta Kappa, May 1973*
- *Recipient of Bausch & Lomb Science Scholarship, June 1969*

Academic

Positions

- *September 2014 – present: Head of Department of Computer and Information Science, University of Oregon, Eugene, OR*
- *September 2014 – present: tenured Full Professor, Department of Computer and Information Science, University of Oregon, Eugene, OR*
- *August 2010 – July 2014: Head of School of Computing Science, University of Glasgow, Glasgow, Scotland*
- *December 2002 – August 2014: Professor of Communication Systems, School of Computing Science, University of Glasgow, Glasgow, Scotland*
- *Spring 1987: Lecturer, Computer Laboratory, Cambridge University, Cambridge, England*

- August 1984 - May 1986: Adjunct Lecturer, Electrical Engineering & Computer Science Department, University of California, Berkeley, CA

Research

Current Interests

Networked and Distributed Systems. Wireless Sensor Networks. Autonomic Computing. Large-scale distributed computing. Embedded Systems. Networks on Chip. Programmable Networks. Complex event processing. Internet of Things.

Grant Funding

Current

Completed

- I received a grant from the Carnegie Trust for the Universities of Scotland (£1.7k) to support the travel necessary to organize a research consortium to prepare a research proposal to pursue “Automated Network Management” within the Future Emerging Technologies sub-programme of the EU’s 6th Framework Programme. These monies were used to prepare the DIAS-MC proposal described below.
- As the principal investigator, I received ~£210k over 2.25 years for a proposal entitled “PRISON: Performance and Resilience of IP-based Signalling for Optical Networks” from the EPSRC. Funding started 1 May 2005.
- As the principal investigator, I have received ~£250k over three years for a proposal entitled “Performance Measurement, Management, and Optimization of Peer-to-Peer Applications” from the EPSRC; my co-investigators on the proposal are Dr. L Mathy and Prof. D. Hutchison of Lancaster University and Dr. H de Meer of Passau University (Germany). The project started 1 February 2004. The total funding for all collaborators is ~£650k.
- As the principal investigator, I have received ~£250k over three years for a proposal entitled “AMUSE: Autonomic Management of Ubiquitous Systems for e-Health” from the EPSRC; my co-investigators on the proposal are Dr. E. Lupu, Dr. N. Dulay, and Prof. M. Sloman of Imperial College London. The project started 1 February 2004. The total funding for all collaborators is ~£525k.
- I nominated Ross C McIlroy for a Carnegie Trust PhD Fellowship to pursue a PhD under my supervision; this fellowship was granted, and Mr. McIlroy started his studies 1 October 2005. This fellowship is worth ~£47k over three years.
- As the principal investigator, I received ~£250k over three years for a proposal entitled “Design, Implementation, and Adaptation of Sensor Networks through Multi-dimensional Co-design (DIAS-MC)” from the EPSRC; my co-investigators on the proposal are Prof. R Morrison/St. Andrews, Prof. J Dunlop/Strathclyde, Dr. AAA Fernandes/Manchester, and Prof. I Marshall/Lancaster. Funding started 1 October 2005. Total funding for all collaborators is ~£1.25M. Glasgow is the lead institution in this consortium.
- As the principal investigator, I received ~£500k over three and one half years for a proposal entitled “Homework: Shaping Future User Centred Domestic Infrastructures” from the EPSRC WINES III Programme; my co-investigators on this collaborative proposal are Prof. T Rodden/Nottingham and Dr. N Dulay/Imperial. Prof M Calder and Dr M Chalmers are co-investigators at Glasgow. Total requested funding for all collaborators is ~£1.6M. Nottingham is the lead institution in this consortium.
- As a co-investigator, Glasgow received ~£400k over three years for a proposal entitled “AnyScale Applications” from the EPSRC SADEA Programme; the Glasgow principal investigator is Dr J Singer, and our co-investigators on this collaborative proposal are Dr V Nagarajan/Edinburgh and Dr. M Lujan/Manchester. Total funding for all collaborators is ~£1.2M. Glasgow is the lead institution in this consortium.
- I nominated Paul Harvey for a Carnegie Trust PhD Fellowship to pursue a PhD under my supervision; this fellowship was granted, and Mr. Harvey started his studies 1 October 2011. This fellowship is worth ~£66k over 42 months.

Pending

- *No grant applications are currently pending*

Publications¹

2016

- {1} G. Maniatis, T. Hoey, M. Hassan, J. Sventek, R. Hodge, T. Drysdale, M. Valyrakis, “Calculation of explicit probability of entrainment based on inertial acceleration measurements”, *Journal of Hydraulic Engineering*, 2016.

2015

- {2} P. Harvey, K. Hentschel, J. Sventek, “Parallel Programming in Actor-Based Applications via OpenCL”, *Proc. of the 16th International Conference on Middleware*, Vancouver, Canada, December 2015. [2]
- {3} P. Harvey, Kristian Hentschel, J. Sventek, “Actors: The Ideal Abstraction for Programming Kernel-Based Concurrency”, *University of Glasgow technical report*, <http://eprints.gla.ac.uk/106354/1/106354.pdf>, May 2015. [1]

2014

- {4} G. Maniatis, T. Hoey, J. Sventek, T. Drysdale, A. Markham, R.A. Hodge, “Smart Dynamic Monitoring and Tracking of Individual Sediment Grains: Design Framework and Experimental Evaluation”, *AGU Fall Meeting Abstracts*, December 2014.
- {5} G. Maniatis, T. Hoey, J. Sventek, R.A. Hodge, “A new sensor system for accurate and precise determination of sediment dynamics and position”, *EGU General Assembly Conference Abstracts*, May 2014.
- {6} Muffy Calder, Alexandros Koliouisis, Michele Sevegnani, Joseph Sventek, “Real-time verification of wireless home networks using bigraphs with sharing”, *Science of Computer Programming*, vol 80, pp. 288-310, ISSN 0167-6423, February 2014. [14]

2013

- {7} Georgios Maniatis, Trevor Hoey, Joseph Sventek, “Sensor Enclosures: Example Application and Implications for Data Coherence”, *Journal of Sensor and Actuator Networks*, Vol 2, No 4, pp. 761-779, December 2013. [4]
- {8} G Maniatis, T Hoey, J Sventek, RA Hodge, “Development of a mobile sensor for robust assessment of river bed grain forces”, *AGU Fall Meeting Abstracts*, Volume 1, December 2013.
- {9} Callum Cameron, Paul Harvey, Joseph Sventek, “A Virtual Machine for the Insense Language,” *Proceedings of Mobilware 23013*, Bologna, Italy, November 2013. [5]
- {10} P Harvey and J Sventek, “Wireless Sensor Network Simulation with Xen”, *Proceedings of the Annual Simulation Symposium*, San Diego, USA, April 2013. [1]

2012

- {11} J Sventek and A Koliouisis, “Unification of Publish/Subscribe Systems and Stream Databases: The Impact on Complex Event Processing”, *Proceedings of the ACM/IFIP/USENIX International Middleware Conference*, Montreal, Canada, December 2012. [7]
- {12} P. Harvey, A. Dearle, J. Lewis and J. Sventek, “Channel and Active Component Abstractions for WSN Programming - A Language Model with Operating System Support”, *Proceedings of SensorNets 2012*, Rome, Italy, February 2012. [12]

¹ Numbers in square brackets indicate the Google Scholar citation count for a particular publication as of 13 October 2016.

- {13} A. Koliouisis and J. Sventek, “DEBS Grand Challenge: Glasgow Automata Illustrated”, Proceedings of the 6th ACM International Conference on Distributed Event-Based Systems, Berlin, Germany, July 2012. [5]
- {14} R. Mortier, T. Rodden, P. Tolmie, T. Lodge, R. Spencer, A. Crabtree, J. Sventek and A. Koliouisis, “Homework: Putting Interaction into the Infrastructure”, Proceedings of the 25th ACM Symposium on User Interface Software and Technology, Cambridge, Massachusetts, USA, October 2012. [22]
- {15} T. Rodden, T. Lodge, D. McAuley, C. Rotsos, A.W. Moore, A. Koliouisis, and J. Sventek, “Control and understanding: Owning your home network”, Proceedings of 4th International Conference on Communication Systems and Networks, Bangalore, India, January 2012. [36]

2011

- {16} J. Sventek, A. Koliouisis, O. Sharma, N. Dulay, D. Pediaditakis, M. Sloman, T. Rodden, T. Lodge, and B. Bedwell, “An Information Plane Architecture Supporting Home Network Management”, Proceedings of the IEEE International Symposium on Integrated Network Management, Dublin, Ireland, May 2011. [27]
- {17} R. Mortier, B. Bedwell, K. Glover, T. Lodge, T. Rodden, C. Rotsos, A. Moore, A. Koliouisis, and J. Sventek, “Supporting Novel Home Network Management Interfaces with Openflow and NOX”, Proceedings of SIGCOMM 2011, Toronto, Ontario, Canada, August 2011. [12]

2010

- {18} R. McIlroy and J. Sventek, “Hera-JVM: a runtime system for heterogeneous multi-core architectures”, Proceedings of the ACM International Conference on Object Oriented Programming Systems Languages and Applications, Reno/Tahoe, NV, USA, October 2010. [23]

2009

- {19} O. Sharma, J. Lewis, A. Miller, A. Dearle, D. Balasubramaniam, R. Morrison and J. Sventek, “Towards Verifying Correctness of Wireless Sensor Network Applications Using Insense and Spin”, Proceedings of the SPIN Workshop, Grenoble, France, June 2009. [26]
- {20} R. McIlroy and J. Sventek, “Hera-JVM: Abstracting Processor Heterogeneity Behind a Virtual Machine”, Proceedings of 12th Workshop on Hot Topics in Operating Systems, Monte Verita, Switzerland, May 2009. [12]

2008

- {21} O. Komolafe and J. Sventek, “Impact of GMPLS Control Message Loss”, Journal of Lightwave Technology, Vol. 26, Issue 14, pp. 2029-2036, July 2008. [18]
- {22} R. McIlroy, P. Dickman and J. Sventek, “Efficient dynamic heap allocation of scratch-pad memory”, Proceedings of the 7th International Symposium on Memory Management, Tucson, USA, pp. 31-40, June 2008. [39]
- {23} W. Emmerich, M. Aoyama and J. Sventek, “The impact of research on middleware technology”, ACM Transactions on Software Engineering and Methodology, Volume 17, Issue 4, pp. 1-48, August 2008. [46]
- {24} O. Komolafe and J. Sventek, “Evaluating and improving the performance of RSVP-TE graceful restart”, Proceedings of the 5th International Conference on Broadband Communications, Networks, and Systems, London, United Kingdom, September 2008. [1]

2007

- {25} O. Sharma, M. Girolami and J. Sventek, “Detecting Worm Variants using Machine Learning”, Proceedings of the International Conference on emerging Networking Experiments and Technologies, New York, USA, December 2007. [15]

- {26} S. Heeps, J. Sventek, N. Dulay, A. Schaeffer-Filho, E. Lupu, M. Sloman and S. Strowes, "Dynamic Ontology Mapping for Interacting Autonomous Systems", Proceedings of the IEEE International Workshop on Self-Organizing Systems, Lancaster, United Kingdom, September 2007. [7]
- {27} S.-L. Keoh, N. Dulay, E. Lupu, K. Twidle, A. Schaeffer-Filho, M. Sloman, S. Heeps, S. Strowes and J. Sventek, "Self-Managed Cell: A Middleware for Managing Body-Sensor Networks", Proceedings of the International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services, Philadelphia, USA, August 2007. [35]
- {28} A. Schaeffer-Filho, E. Lupu, N. Dulay, S.-L. Keoh, K. Twidle, M. Sloman, S. Heeps, S. Strowes and J. Sventek, "Towards Supporting Interactions between Self-Managed Cells", Proceedings of the IEEE International Conference on Self-Adaptive and Self-Organizing Systems, Boston, USA, July 2007. [27]
- {29} O. Komolafe and J. Sventek, "Analysis of RSVP-TE Graceful Restart", Proceedings of the IEEE International Conference on Communications, Glasgow, Scotland, June 2007. [7]
- {30} E. Lupu, N. Dulay, J. Sventek and M. Sloman, "Autonomous Pervasive Systems and the Policy Challenges of a Small World", Proceedings of the IEEE International Workshop on Policies for Distributed Systems and Networks, Bologna, Italy, June 2007. [7]
- {31} E. Lupu, N. Dulay, M. Sloman, J. Sventek, S. Heeps, S. Strowes, K. Twidle, S.-L. Keoh and A. Schaeffer-Filho, "AMUSE: autonomic management of ubiquitous e-Health systems", Concurrency and Computation: Practice and Experience, Volume 20, Issue 3, pp. 277-295, May 2007. [118]
- {32} A. Koliouisis and J. Sventek, "A Trustworthy Mobile Agent Infrastructure for Network Management", Proceedings of the IFIP/IEEE Symposium on Integrated Management, Munich, Germany, May 2007. [20]
- {33} S. Keoh, K. Twidle, N. Pryce, A. Schaeffer-Filho, E. Lupu, N. Dulay, M. Sloman, S. Heeps, S. Strowes, J. Sventek and E. Katsiri, "Policy-based Management of Body-Sensor Networks", Proceedings of the International Workshop on Wearable and Implantable Body Sensor Networks, Aachen, Germany, March 2007. [33]
- {34} W. Emmerich, M. Aoyama and J. Sventek, "The impact of research on middleware technology", ACM SIGSOFT Software Engineering Notes, Volume 32, Issue 1, pp. 21-46, January 2007. [34]
- {35} O. Komolafe and J. Sventek, "Overview of Enhancements to RSVP-TE to Increase Control Plane Resilience", Proceedings of the IEEE Workshop on GMPLS Performance: Control Plane Resilience, Glasgow, United Kingdom, June 2007. [10]
- {36} R. McIlroy, P. Dickman and J. Sventek, "Operating System Support for Asymmetric Multi-Core Architectures", Proceedings of Eurosys 2007, Lisbon, Portugal, March 2007. [1]

2006

- {37} S. Heeps, N. Dulay, A. Schaeffer-Filho, E. Lupu, M. Sloman, S. Strowes and J. Sventek, "The Autonomic Management of Ubiquitous Systems meets the Semantic Web", 2nd Int. Workshop on Semantic Web Technology for Ubiquitous and Mobile Applications (SWUMA 2006), Trentino, Italy, Aug. 2006. [4]
- {38} S. Strowes, N. Badr, N. Dulay, S. Heeps, E. Lupu, M. Sloman and J. Sventek, "An Event Service Supporting Autonomic Management of Ubiquitous Systems for e-Health", Proceedings of International Workshop on Distributed Event-Based Systems, Lisbon, Portugal, July 2006. [20]
- {39} R. McIlroy and J. Sventek, "Resource Virtualisation of Network Routers", Proceedings of the IEEE Workshop on High Performance Switching and Routing, Poznan, Poland, June 2006. [19]

- {40} J. Paisley and J. Sventek, “Real-time Detection of Grid Bulk Transfer Traffic”, Proceedings of the 10th IEEE/IFIP Network Operations Management Symposium, Vancouver, Canada, April 2006. [18]

2005

- {41} I. Dedinski, H. De Meer, L. Han, L. Mathy, D. Pezaros, J. Sventek and Z. Xiaoying, “Cross-Layer Peer-to-Peer Traffic Identification and Optimization Based on Active Networking”, Proceedings of the 7th International Working Conference on Active and Programmable Networks, Sophia Antipolis, France, November 2005. [45]
- {42} N. Dulay, E. Lupu, M. Sloman, J. Sventek, N. Badr and S. Heeps, “Self-Managed Cells for Ubiquitous Systems”, Proceedings of the 3rd Intl Conference on Mathematical Methods, Models and Architectures for Computer Networks Security (MMM-ACNS 2005), St Petersburg, Russia, LNCS 3685, pp. 1–6, Sept 2005. [10]
- {43} N. Dulay, S. Heeps, E. Lupu, R. Mathur, O. Sharma, M. Sloman and J. Sventek, “AMUSE: Autonomic Management of Ubiquitous e-Health Systems”, Proceedings of the UK e-Science All Hands Meeting, Nottingham, UK, September 2005. [10]
- {44} J. Sventek, N. Badr, N. Dulay, S. Heeps, E. Lupu and M. Sloman, “Self-Managed Cells and their Federation”, Workshop Proceedings of the 17th Conference on Advanced Information Systems Engineering (CAiSE’05), June 2005. [20]
- {45} O. Komolafe and J. Sventek, “RSVP Performance Evaluation using Multi-Objective Evolutionary Optimisation”, Proceedings of IEEE Infocom, Miami, Florida, USA, March 2005. [24]

2004

- {46} D. Pezaros, D. Hutchison, F. Garcia, R. Gardner, and J. Sventek, “Service Quality Measurements for IPv6 Inter-networks”, Proceedings of the 12th International Workshop on Quality of Service, Montreal, Canada, June 2004. [13]
- {47} D. Pezaros, D. Hutchison, R. Gardner, F. Garcia, and J. Sventek, “Inline Measurements: a Native Measurement Technique for IPv6 Networks”, Proceedings of the International Networking and Communications Conference, Lahore, Pakistan, June 2004. [14]
- {48} O. Komolafe and J. Sventek, “An Evaluation of RSVP Control Message Delivery Mechanisms”, Proceedings of the IEEE Workshop on High Performance Switching and Routing, Phoenix, Arizona, USA, April 2004. [14]
- {49} D. Pezaros, D. Hutchison, F. Garcia, R. Gardner, and J. Sventek, “In-line Service Measurements: an IPv6-based Framework for Traffic Evaluation and Network Operations”, Proceedings of the IEEE/IFIP Network Operations and Management Symposium, Seoul, Korea, April 2004. [18]

(Additional publications listed below in the Industry and PhD sections.)

Teaching

Courses Taught²

Oregon courses

- CIS 407/507, *Event Processing Systems Seminar*, level 4/5: Winter Quarter 2015, Winter Quarter 2016
- CIS 415, *Operating Systems*, level 3/4: Spring Quarter 2015, Spring Quarter 2016, Fall Quarter 2016
- CIS 210, *Introduction to Computer Science I*, level 1/2: Fall Quarter 2015, Fall Quarter 2016

² Level 1 = freshman, level 2 = sophomore, level 3 = junior, level 4 = senior, level 5 = graduate student course.

Glasgow courses

- *Advanced Programming, level 3: Autumn 2010, Autumn 2011, Autumn 2012, Autumn 2013*
- *Operating Systems, level 3: Spring 2007, Spring 2008, Spring 2009, Spring 2010, Spring 2011, Spring 2012, Spring 2013*
- *Object-Oriented Software Engineering, level 2: Spring 2008, Spring 2009*
- *Software Design and Implementation, level 2: Spring 2004, Spring 2005, Spring 2006, Spring 2007*
- *Distributed Algorithms and Systems, level 4: Autumn 2008*
- *C Language Programming, level 3: Autumn 2007*
- *Real Time and Embedded Systems, level 4: Spring 2004*
- *Research Methods & Techniques, level 5: Autumn 2004*
- *Advanced Research Readings in Systems, level 5: Spring 2013, Spring 2014*
- *Advanced Topics in Computing Science, level 5: Autumn 2004*

Institute of System Level Integration (level 5) courses

- *Sensor Networks: Spring 2010*
- *Embedded Networking: Spring 2010*
- *Embedded Operating Systems: Spring 2006, Autumn 2006*
- *Embedded Applications: Spring 2004, Spring 2005*
- *Embedded Software Basics: Autumn 2004*

Other institutions

- *Digital Communications, undergraduate level 3/4, Cambridge, Spring 1987*
- *Operating Systems, undergraduate level 3/4, Berkeley, Autumn 1984, Spring 1985, Autumn 1985, Spring 1986*

Courses Developed

- *Object-Oriented Software Engineering, level 2, Glasgow, Spring 2008.*
- *C Language Programming, level 3, Glasgow, Autumn 2007*
- *Advanced Programming, level 3, Glasgow, Autumn 2010*
- *Embedded Operating Systems, Level 5, ISLI, Autumn 2006.*
- *Embedded Applications, Level 5, ISLI, Spring 2005.*
- *Research Methods & Techniques, Level 5, Glasgow, Autumn 2004*
- *Advanced Topics in Computing Science, Level 5, Glasgow, Autumn 2004*
- *Real Time and Embedded Systems, level 4, Glasgow, Spring 2004*
- *Operating Systems, undergraduate level 3/4, Berkeley, Autumn 1985-Spring 1986*

Programmes Developed

- *MSc in Sensor Networks, Institute of System Level Integration, Autumn 2012.*
- *Level 1 stream for non-honours students, University of Glasgow, Autumn 2009*
- *Level 2 Software Engineering Curriculum, University of Glasgow, Autumn 2007*
- *Advanced MSc in Computing Science, University of Glasgow, Autumn 2004*
- *MSci³ in Computing Science, University of Glasgow, Autumn 2004*

³ MSci is a 5-year, integrated masters programme.

Student Supervision

Research in Progress

- *PhD studies, Eugene Osborne. Research area: linguistic approaches to heterogeneous multicore computers.*

Research Completed

- *Georgios Maniatis, "Eulerian-Lagrangian definition of coarse bed-load transport – theory and verification with low-cost inertial measurement units", PhD, awarded December 2016.*
- *Michael Comerford, "Statistical disclosure control: an interdisciplinary approach to the problem of balancing privacy risks and data utility", PhD, awarded December 2016.*
- *Paul Harvey, "A Linguistic Approach to Concurrent, Distributed, and Adaptive Programming across Heterogeneous Platforms", PhD, awarded June 2016.*
- *Riaz ul Amin, "Vehicular ad hoc communication in unplanned urban areas", PhD, awarded June 2015.*
- *Hassan Syed, "An Architecture for Server-Dynamic User Tracking Across Web-Farms", MSc, awarded June 2012.*
- *Alex Koliouisis, "An elementary proposition on the dynamic routing problem in wireless networks of sensors", PhD, awarded December 2010.*
- *Ross McIlroy, "Using Program Behaviour to Exploit Heterogeneous Multi-Core Processors", PhD, awarded June 2010.*
- *Oliver Sharma, "Detecting Worm Mutations Using Machine Learning", PhD, awarded June 2009.*
- *Zhan Xiaoying, "Application of Overlay Techniques to Network Monitoring", PhD, awarded December 2008.*
- *Steven Heeps, "Application Collaboration in Ubiquitous Computing Environments", MSc, awarded June 2008.*
- *Declan Hegarty, "FPGA-based Architectures for Next Generation Communication Networks", EngD, awarded June 2008.*
- *Jonathan Paisley, "Application and Network Traffic Correlation of Grid Applications", PhD, awarded December 2006.*
- *Guobin Han, "Grid Scheduling Veneer", MSc. awarded December 2005.*

Projects in Progress

Projects Completed

- *MSci project, Fergus Leahy, "IoT/Smart Home Router Integration", April 2014..*
- *BSc(Hons) project, Shinyi Breslin, "Insense Simulator", March 2014.*
- *BSc(Hons) project, Kristian Hentschel, "Implementing Insense with OpenCL", March 2014.*
- *BSc(Hons) project, Dmitrijs Kovalenko, "Insense code generation tool and porting the Insense language to 32-bit systems.", March 2014.*
- *BSc(Hons) project, Craig McLaughlin, "Move Analysis: An Interprocedural Data Flow Analysis for Efficient Message Passing", March 2014.*
- *MSc project, Alexander Aavang, "Component-Based Graphical Design", September 2013.*
- *MSci project, Callum Cameron, "A Virtual Machine for the Insense Language", April 2013.*
- *BSc(Hons) project, Fergus Leahy, "A lightweight protocol for constrained devices for use in the Internet of Things paradigm", April 2013.*
- *BSc(Hons) project, Javier Lazaro Munoz, "Garbage Collector based on Reference Counting for InceOs", April 2013.*
- *BSc(Hons) project, Michal Pietras, "Lightweight Cloudlet Platform for Cyber Foraging by Mobile Devices", April 2013.*

- *BSc(Hons) project, Xun Zhang, "Scheduling Issues in the Emulation of Large Sensor Networks", April 2013.*
- *MSci project, John Morton, "Nest - Implicit Parallel Python", April 2012.*
- *BSc(Hons) project, Jonathan Balkind, "Flow classification of home network traffic using machine learning techniques", April 2012.*
- *BSc(Hons) project, Callum Cameron, "A Wireless Sensor Node for Monitoring the Effects of Fluid Flow on Riverbed Sediment", April 2012.*
- *BSc(Hons) project, Calum McCall, "Secure Remote Management Of Home Networks", April 2012.*
- *MSci project, Marcin Orczyk, "Islands - a Hybrid Haskell Runtime System", April 2011.*
- *BSc(Hons) project, John Morton, "Cobweb - Web Access to Current and Archived Data from an Ad-hoc Wireless Sensor Network", April 2011.*
- *MSci project, Paul Harvey, "InceOS: The Insense-Specific Operating System", April 2010.*
- *MSci project, David Warnock, "Dynamic Affinity Scheduling in Heterogeneous Multi-Core Processors", April 2009.*
- *BSc(Hons) project, Keir Lawson, "Evaluating Wireless Routing Metrics", April 2009.*
- *BSc(Hons) project, Neil Henning, "Software Transactional Memory on the Cell Microprocessor", April 2009.*
- *BSc(Hons) project, Paul Harvey, "Contiki Meets Xen", April 2009.*
- *BSc(Hons) project, Vincent Gatehouse, "A Virtual Memory System for Resource Constrained Environments", April 2009.*
- *MSc. project, Saima Khan, "Assessment of the Application of Genetic Algorithms to Network Planning and Path Computation", September 2008.*
- *BSc(Hons) project, Filip Wieladek, "k-resilient Wireless Sensor Networks", April 2008.*
- *BSc(Hons) project, Jamie Coates, "Efficient Routing Protocol Support for TinyOS", April 2008.*
- *BSc(Hons) project, Alasdair Maclean, "Xen Meets TinyOS", April 2008.*
- *BSc(Hons) project, Martin Ellis, "Security in Environmental Sensor Networks", April 2008.*
- *MSc. project, Simon Connell, "Alternative Scheduling Mechanisms for TinyOS", September 2007.*
- *MSc. project, Ioannis Giagkoudis, "Creation of BibTeX Entries from Stored Publication Data", September 2006.*
- *MSc. project, Arun Ramachandran, "Implementation of Compiler Back End for b16 Microprocessor Architecture", September 2006.*
- *BSc(Hons) project, David Lindores, "OSPF Network Simulation", April 2006.*
- *BSc(Hons) project, Chris Miller, "Mobile Phone Forensics", April 2006.*
- *MSc. project, Alexandros Koliouisis, "A Trustworthy Mobile Agent Infrastructure for Network Management", September 2005.*
- *MSc. project, Shantnu Tiwari, "3D Gaming on the ARM SMP Multiprocessor", September 2005.*
- *MSci project, Ross McIlroy, "Network Router Resource Virtualisation", May 2005.*
- *MSci project, Christopher Bayliss, "An Optical Network Simulator", May 2005.*
- *BSc(Hons) project, John Ewing, "Using Analysis of OSPF Packets to Determine Network Topology", April 2005.*
- *MSc. project, Andrew Pettican, "Wireless Lecture Theatre Handset", September 2004.*
- *MSc. project, Peter Sinka, "Developing Tracking Functionality Using Bluetooth", September 2004.*
- *MSc. project, Oluwafemi Ajayi, "A Simulation Model for FAST TCP", September 2004.*

- *BSc(Hons) project, Alexnewton Alexander, "Portable Interactive WLAN Troubleshooting Tool", April 2004.*
- *BSc(Hons) project, Oliver Sharma, "Java Packet Monitoring Toolkit", April 2004.*
- *MSc. project, Norman Pino, "Searchable Web-based Portfolio Manager for Multimedia Artists", September 2003.*
- *BSc(Hons) project, Mark Bryars, "Embedding NS/2 simulations in a real network", April 2003.*
- *BSc(Hons) project, Paul Douglas, "A Java Packet Monitoring Toolkit", April 2003.*

Internal/External Ph.D. Examinations

- *Mohammed Alenezi, University of Essex, "Detecting, Tracing and Mitigating Against Denial of Service in IP Networks", August 2014.*
- *Daphne Tuncer, University College London, "Engineering Self-Managed Adaptive Networks", November 2013.*
- *Victor Faion, Imperial College London, "Congestion Avoidance in Tag-Based Networks Through Multipath Routing", November 2013.*
- *Ian Mothersole, University of Essex, "Optimising network layer firewalls using rule manipulation", April 2013.*
- *Dominic Jones, Trinity College Dublin, "An Approach to Managed Clustering for Knowledge-based Networks", May 2011.*
- *Giacomo Bernardi, University of Edinburgh, "Deployment and Operational Aspects of Rural Broadband Wireless Access Networks", April 2011.*
- *Vladimir Dyo, University College London, "Adaptive Duty Cycling in Mobile Sensor Networks", August 2009.*
- *Marinos Charalambides, University of Surrey, "Policy Analysis for DiffServ Quality of Service Management", July 2009.*
- *Jamal-den Abdulai, University of Glasgow, "Probabilistic Route Discovery for Wireless Mobile Ad Hoc Networks (MANETs)", January 2009.*
- *Alexander Young, University of Edinburgh, "Wireless Realtime Motion Tracking System using Localised Orientation Estimation", August 2008.*
- *Ameet Patil, University of York, "Application-Specific Resource Management in Real-Time Operating Systems", November 2007.*
- *Zheng Lu, University of Essex, "Edge Smoothing and Congestion Control for Optical Packet Switching", November 2007.*
- *Yangcheng Huang, University College London, "Improving Signaling Performance of Proactive MANET Routing Protocols", September 2007.*
- *Nasser Alzeidi, University of Glasgow, "Performance Analysis of Wormhole Switched Interconnection Networks with Virtual Channels and Finite Buffers", September 2007.*
- *Apostolos Malatras, University of Surrey, "Context-Awareness for the Self-Management of Mobile Ad Hoc Networks", May 2007.*
- *Eiko Yoneki, University of Cambridge, "ECCO: Data centric asynchronous communication", October 2006.*
- *Stylianos Papanastasiou, University of Glasgow, "Investigating TCP Performance in Mobile Ad Hoc Networks", September 2006.*
- *Alastair Hampshire, University of Nottingham, "Extending the Open Grid Services Infrastructure to Intermittently Available Network Environments", December 2005.*
- *Parisis Flegkas, University of Surrey, "Policy-based Quality of Service Management for IP Networks", June 2005.*
- *Eleftheria Katsiri, Cambridge University, "Middleware Support for Context-Awareness in Distributed Sensor-Driven Systems", September 2004.*

- Steven McKellar, Cambridge University, “An Extension to the OSI Model of Network Management for Large-Scale Collaborative Performance Measurement”, September 2004.
- Leonidas Lymberopoulos, Imperial College London, “An Adaptive Policy Based Framework for Network Management”, June 2004.
- Kong Woei Susanto, University of Glasgow, “A Verification Platform for System on Chip”, March 2004.
- Aled Sage, University of St Andrews, “Observation-Driven Configuration of Complex Software Systems”, September 2003.
- Stefan Schmid, Lancaster University, “A Component-based Active Router Architecture”, December 2002.
- Ian MacDonald, University of Glasgow, “Memory Management in a Distributed System of Single Address Space Operating Systems Supporting Quality of Service”, May 2001. (I was external examiner, as I was employed by Agilent Technologies at the time.)

Internal/External M.Sc. Examinations

- Conor Cahir, University of Glasgow, “Approaches to Adaptive Bitrate Video Streaming”, November 2013.
- Alvaro Saurin, University of Glasgow, “Congestion Control for Video Conferencing Applications”, July 2006.

Administration

Current Responsibilities

- Head of Department of Computer and Information Science, University of Oregon.
- Led a task force to specify, acquire, and operationalize a new High Performance Computing (HPC) Facility at the University of Oregon. This facility was operational in December 2016; it operates at ~250 TFlops, and has 1.5 PB of high-speed parallel storage.
- Member of the interim management team for the Information Services function at the University of Oregon, particularly focused on infrastructure activities. We are currently installing redundant core network switches, operating at 100 gbit/sec, and planning the installation of 10 gbit/sec edge switches in various building across campus; initial rollout is focused on the HPC and departments that will be the initial users of that facility. Full deployment of edge switches will be a 4-5 year effort.
- Chairman of the Faculty Advisory Committee for the HPCF.
- Member of College of Arts and Sciences “Wise Heads”, September 2014 – present.
- Member of the Internal Advisory Board for the Knight Campus for Translational and Applied Science at the University of Oregon.

Past Responsibilities

- Member of search committee for a new CIO and for the director of the HPCF.
- Head of School of Computing Science, University of Glasgow.
- Deputy directory, Scottish Informatics and Computer Science Alliance.
- Convenor of the Glasgow DCS research committee.
- Represent Glasgow DCS on the management committee for the Institute of System Level Integration, Livingston.
- Represent Glasgow DCS on the management committee for the Faculty of Information and Mathematical Sciences.

Industry

Research

Positions

- *April 2002 - November 2002: Research Fellow, Communications Systems, Agilent Laboratories, Edinburgh, Scotland*
- *September 1999 - March 2002: Distinguished Engineer for Distributed Computing, Agilent Laboratories, Edinburgh, Scotland*
- *April 1994 - August 1999: Distinguished Engineer for Distributed Computing, Hewlett-Packard Research Laboratories, Palo Alto, CA*
- *April 1992 - March 1994: Lead Architect, Distributed Computing Program, Hewlett-Packard Company, Cupertino, CA*
- *April 1991 - March 1992: Senior Engineer, Distributed Application Architecture Laboratory, Information Architecture Group, Hewlett-Packard Company, Cupertino, CA*
- *August 1990 - March 1991: Software Design Engineer, Distributed Application Architecture Laboratory, Information Architecture Group, Hewlett-Packard Company, Cupertino, CA*
- *June 1986 - July 1990: Deputy Chief Architect, ANSA Project, Cambridge, England*
- *January 1980 - May 1986: Research Computer Scientist, Lawrence Berkeley Laboratory, Berkeley, CA*

Grant Funding

Completed

- *As the principal investigator, I received ~\$1.2M over four years for a proposal entitled "Local Area Network Measurement and Modeling" from the U.S. Department of Energy, Basic Energy Sciences, Applied Mathematical Sciences Division. Funding started 1 June 1982, ended 31 May 1986.*
- *As the principal investigator, I received ~\$200k in kind (4 x Vax-11/750 computers) for a proposal entitled "Scientific Workstation Computers in Heterogeneous Network Environments", Digital Equipment Corporation External Research Program. These machines were delivered for use in June 1983.*

Publications

2002

{50} P. Eugster, R. Guerraoui and J. Sventek, "Loosely Coupled Components", The Kluwer International Series in Engineering and Computer Science, 2002, Volume 648, Part 2, 175-205, DOI: 10.1007/978-1-4615-0883-0_6, 2002. [1]

2001

{51} P. Eugster, R. Boichat, R. Guerraoui and J. Sventek, "Effective Multicast Programming in Large Scale Distributed Systems," *Concurrency and Computation: Practice and Experience*, Vol. 13, No 6, 421-447, 2001. [22]

2000

{52} P. Eugster, R. Guerraoui and J. Sventek, "Distributed Asynchronous Collections: Abstractions for Publish/Subscribe Interaction," *Lecture Notes in Computer Science*, Vol. 1850, pp. 252-276, June 2000. [126]

{53} J. S. Sventek and G. Coulson (eds.), "Proceedings of the IFIP/ACM International Conference on Distributed Systems Platforms," New York, NY, April 2000, Springer Verlag.

1999

- {54} D. Hutchison, G. Pacifici, B. Plattner, R. Stadler and J. Sventek (eds.), "Service Enabling Platforms for Networked Multimedia Systems," IEEE Journal on Selected Areas in Communications, Volume 17, Issue 9, September 1999. [4]

1998

- {55} M.C. Hao, D. Glajchen, and J.S. Sventek, "SmallSync: A Methodology for Diagnosis and Visualization of Distributed Processes on the Web," IEEE 7th Workshop on Enabling Technologies: Infrastructure for Collaborative Enterprises, June 1998. [1]

1996

- {56} M.C. Hao, D. Lee, and J.S. Sventek, "A Light-weight Application Sharing Infrastructure for Graphics Intensive Applications," Proceedings of HPDC 1996. [2]
- {57} J. Sventek and M. Hao, "Collaborative design using your favorite 3D applications," Proceedings of the Concurrent Engineering 1996 Conference, Toronto, Canada, September 1996. [6]

1992

- {58} J. Sventek, "The Distributed Application Architecture," prepared for the International Conference on Enterprise Integration Modeling Technology, Workshop on Heterogeneous Execution Environments, 10-13 March 1992, Nice, France. [7]
- {59} R. van der Linden and J. Sventek, "The ANSA trading service", IEEE Computer Society Technical Committee Newsletter on Distributed Processing, Volume 14 Issue 1, June 1992. [15]

1987

- {60} J. Sventek, "An Architecture Supporting Multi-media Integration," Proceedings of the IEEE Computer Society Office Automation Symposium, Gaithersburg, MD, April 1987. [36]

1984

- {61} J. Sventek, W. Greiman, M. O'Dell and A. Jansen, "Token Ring Local Area Networks - A Comparison of Experimental and Theoretical Performance," Computer Networks, Vol. 8, No. 4, August 1984. [20]

1982

- {62} J. Sventek, "Portability Issues in the Design of Distributed Applications - A Portable, Electronic Mail System," Proceedings of the IEEE Computer Conference, Washington, DC, September 1982. [1]

1980

- {63} D. Hall, D. Scherrer and J. Sventek, "A Virtual Operating System," Communications of the ACM, Vol. 23, No. 9, September 1980. [47]

Technical Reports

- Hao, M and J. Sventek, "A Non-invasive Platform Supporting Distributed, Real-Time Collaboration," report HPL-98-101, submitted for publication in IEEE Journal on Selected Areas of Communication.
- Sventek, J., "Intelligent Multicast Fabrics," report HPL/STL/DSA-1998-002.
- Sventek, J., "Content-Based Constraint Processing in Trading Services," report STLDPC-1995-002, March 1996.
- Gustafson, J., J. Ketonen, and J. Sventek, "A Model of Application Integration and Communication," submitted to OOPSLA '92.
- Sventek, J., J. Bedford-Roberts and D. Lee, "Interface Trading," ANSA Project report RC.21.

- *Sventek, J., W. Johnston and A. Yen, "Distribution of Graphics Functions in Heterogeneous Network Environments," Lawrence Berkeley Laboratory report LBL-16284, June 1983.*

Patents

- {64} Francisco Garcia, Robert Gardner and Joseph S Sventek, MEASURING NETWORK OPERATIONAL PARAMETERS AS EXPERIENCED BY NON SYNTHETIC NETWORK TRAFFIC, European patent 1,401,147. [94]
- {65} Andrew Lehane, Francisco Garcia and Joseph S Sventek, IDENTIFYING NETWORK ROUTERS AND PATHS, European patent 1,387,527. [33]
- {66} Dean R. Thompson, Patrick Goldsack, Graham S. Pollock, Joseph S. Sventek, SYSTEM CONFIGURATION FOR MULTIPLE COMPONENT APPLICATION BY ASSERTING REPEATEDLY PREDETERMINED STATE FROM INITIATOR WITHOUT ANY CONTROL, AND CONFIGURATION ENGINE CAUSES COMPONENT TO MOVE TO PREDETERMINED STATE, US Patent Number 6,535,975, granted 18 March 2003. [13]
- {67} Ming C. Hao, Michael E. Goss and Joseph S. Sventek, NON-INVASIVE MECHANISM TO AUTOMATICALLY ENSURE 3D-GRAPHICAL CONSISTENCY AMONG A PLURALITY OF APPLICATIONS, US Patent Number 6,330,685, granted 11 December 2001. [15]
- {68} Ming C. Hao and Joseph S. Sventek, METHOD FOR SHARING AND EXECUTING INACCESSIBLE DYNAMIC PROCESSES FOR REPLICA CONSISTENCY AMONG A PLURALITY OF EXISTING APPLICATIONS, US Patent Number 6,314,453, granted 6 November 2001, 10 citations as of 12 August 2012. [18]
- {69} Ming C. Hao and Joseph S. Sventek, SYNCHRONIZED CURSOR SHARED AMONG A NUMBER OF NETWORKED COMPUTER SYSTEMS, US Patent Number 6,115,027, granted 5 September 2000. [40]
- {70} Ming C. Hao and Joseph S. Sventek, REAL-TIME SYNCHRONIZATION OF CONCURRENT VIEWS AMONG A PLURALITY OF EXISTING APPLICATIONS, US Patent Number 5,828,866, granted 27 October 1998. [36]

Management

- *October 1999 - April 2002: Manager, Communications Solutions Department, Agilent Laboratories*
- *February 1999 - September 1999: Director of the Software Technology Laboratory, Hewlett-Packard Research Laboratories, Palo Alto, CA*
- *April 1995 - January 1999: Manager of the Distributed Middleware Department, Hewlett-Packard Research Laboratories, Palo Alto, CA*

PhD

Research

After completing my undergraduate degree in Mathematics at the University of Rochester, I enrolled as a PhD student in the College of Chemistry at the University of California, Berkeley. I was interested in possibly pursuing research into quantum or nuclear chemistry. After some deliberation, I chose to study nuclear chemistry under the supervision of Prof. L.G. Moretto.

I worked on a number of topics during my PhD career. The primary research was into semi-classical methods for describing the reaction products from heavy ion reactions, with projectile energies in the 10-30 MeV/nucleon range. The rest of Prof Moretto's group measured the reaction products for these types of reactions at the 88" Cyclotron and the

Heavy Ion Linear Accelerator at Lawrence Berkeley Laboratory; I assisted the group, but together with Prof Moretto, I was primarily focused on the theory behind these reactions.

We coined the term “nuclear diffusion” for the mechanism behind these reactions, as the reaction products exhibited characteristics consistent with a rotating complex of the projectile and target nuclei, with an approach-to-equilibrium process diffusing nuclei through the complex, driven by nuclear and electromagnetic gradients. Besides the publications listed below, this resulted in the dissertation entitled “A Non-equilibrium Statistical Mechanical Approach to Heavy-ion Reactions”.

Publications

1982

- {71} G.J. Mathews, J.B. Moulton, G.J. Wozniak, B. Cauvin, R.P. Schmitt, J.S. Sventek, and L.G. Moretto, “ ^{20}Ne -induced reactions with Cu and ^{197}Au at 8.6 and 12.6 MeV/nucleon”, *Phys. Rev. C* 25, 300-312 (1982). [27]

1979

- {72} L.G. Moretto, J. Sventek and G. Mantzouranis, “Giant E1 Mode and Its Energy Broadening from the Charge Distributions in Heavy-Ion Reactions”, *Phys. Rev. Lett.* 42, 563–566 (1979). [38]

1978

- {73} R. Regimbart, A.N. Behkami, G.L. Wozniak, R.P. Schmitt, J.S. Sventek and L.G. Moretto, “ γ -Ray Multiplicities from a Diffusion Model Incorporating One-Body Dissipation”, *Phys. Rev. Lett.* 41, 1355–1358 (1978). [22]
- {74} J.S. Sventek and L.G. Moretto, “Theoretical Correlation between Energy Dissipation, Angular Momentum Transfer, and Charge Diffusion in Deep Inelastic Reactions”, *Phys. Rev. Lett.* 40, 697–700 (1978). [21]

1977

- {75} P. Russo, R.P. Schmitt, G.J. Wozniak, R.C. Jared, P. Glassel, B. Cauvin, J.S. Sventek, and L.G. Moretto, “Evidence for diffusive relaxation along the mass asymmetry coordinate in the reaction $^{197}\text{Au} + 620 \text{ MeV } ^{86}\text{Kr}$ ”, *Nuclear Physics A*, Volume 281, Issue 3, Pages 509–532, 9 May 1977. [24]

1976

- {76} J.S. Sventek and L.G. Moretto, “Diffusion model predictions for heavier systems: The reaction $^{197}\text{Au} + 620 \text{ MeV } ^{86}\text{Kr}$ ”, *Physics Letters B*, Volume 65, Issue 4, Pages 326–330, 6 December 1976. [23]
- {77} L.G. Moretto and J.S. Sventek, “Diffusive phenomena reflected in the charge and angular distributions of N, Ne, Ar, Kr induced reactions”, *Symposium on macroscopic features of heavy ion collisions*, Argonne, IL, USA, 1 April 1976.
- {78} L.G. Moretto, B. Cauvin, P. Glaessel, R. Jared, P. Russo, J. Sventek, and G. Wozniak, “Diffusive Phenomena in the Charge and Angular Distributions for the Reaction $^{197}\text{Au} + 620 \text{ MeV } ^{86}\text{Kr}$ ”, *Physical Review Letters*, Volume 36, Number 18, Page 1069. [32]

1975

- {79} L.G. Moretto and J.S. Sventek, “A theoretical approach to the problem of partial equilibration in heavy ion reactions”, *Physics Letters B*, Volume 58, Issue 1, Pages 26–30, 18 August 1975. [197]

1974

- {80} J.R. Huizenga, A.N. Behkami, R.W. Atcher, J.S. Sventek, H.C. Britt, and H. Freiesleben, “Comparison of neutron resonance spacings with microscopic theory for nuclei with static deformation”, *Nuclear Physics A*, Volume 223, Issue 3, Pages 589–598, 6 May 1974. [46]

{81} J.R. Huizenga, A.N. Behkami, J.S. Sventek, and R.W. Atcher, "Comparison of neutron resonance spacings with microscopic theory for spherical nuclei", Nuclear Physics A, Volume 223, Issue 3, Pages 577-588, 6 May 1974. [36]

Professional Service

General Chair and/or Program Chair/Co-Chair

- Program Co-Chair, Distributed Event-Based Systems Conference, Cambridge, UK, July 2010.
- General Chair, EuroSys 2008, Glasgow, Scotland, April 2008.
- Program Co-Chair, Workshop on GMPLS Performance: Control Plane Resilience, allied with ICC2007, Glasgow, Scotland, June 2007.
- General Co-Chair, ACM/IFIP/USENIX International Conference on Distributed System Platforms (Middleware), Melbourne, Australia, November 2006
- Program Co-Chair, IEEE Workshop on Self-Managing Computer Systems, May 2005
- General Chair, ACM/IFIP International Conference on Distributed System Platforms (Middleware), Heidelberg, Germany, November 2001
- Program Co-Chair, ACM/IFIP International Conference on Distributed System Platforms (Middleware), New York, NY, April 2000
- General and Program Chair, Telecommunications Information Network Architecture (TINA) Conference, Turtle Bay Resort, HI, May 1999.
- Program Chair for the USENIX Conference on Object-Oriented Technologies and Systems (COOTS), Santa Fe, NM, May 1998.

Program Committee Member

Acronym	Conference/Workshop	Year[s]
ACNM	Workshop on Autonomic Communication and Network Management	2007
COMPSAC	International Computer Software and Application Conference	2005
COOTS	USENIX Conference on Object-Oriented Technologies and Systems	1997, 1999, 2001
DEBS	Distributed Event-Based Systems Workshop/Conference	2002, 2004, 2005, 2007, 2008, 2009, 2011
DISN	Workshop on Data Intensive Sensor Networks	2007
DSOM	IFIP/IEEE Conference on Distributed Systems: Operations and Management	2005
HPDC	IEEE High-Performance Distributed Computing Conference	2002
ICDCS	IEEE International Conference on Distributed Computing Systems	2006
IM	IEEE Integrated Management Symposium	2005, 2009
IWQoS	International Workshop on Quality of Service	2005
Middleware	ACM/IFIP/USENIX International Conference on Distributed Systems Platforms	2003, 2004, 2007
NOMS	IEEE/IFIP Network Operations and Management Symposium	2006, 2008, 2010, 2014
OOPSLA	ACM Conference on Object-Oriented Programming, Systems, Languages and Applications	1995, 1997
Policy	IEEE Policy-Based Management Workshop	2004, 2005, 2006, 2007
SASO	IEEE International Conference on Self-Adaptive and Self-Organizing Systems	2007
SIGCOMM	ACM Special Interest Group in Communications Conference	2003
TINA	Telecommunications Information Network Architecture	1996, 1997

	Conference	
	IEEE International Workshop on Self-Managed Networks, Systems and Services	2005, 2006
	USENIX Technical Conference	2005
	Workshop on Technologies for Eservices	2002

Knowledge Transfer

As manager of the Distributed Middleware Department at HP Laboratories, I led the HP efforts to spin out the results of one of our research groups to form a startup company in 1998 named TimesTen Performance Software; the initial valuation of the company was \$5M. I attended board meetings, representing HP's investment in the company, until I relocated to Scotland in May 1999 to start Agilent Laboratories Scotland. TimesTen was acquired by Oracle in June 2005 for ~\$500M.

Other Activities

- 2009, became member of the executive committee of the UKCRC
- 2006, became member of steering committee for the UK Grand Challenge effort
- 2003, member of organizing committee for European Personal Mobile Communications Conference
- 1999, chair for Advanced Topics Workshop at COOTS 1999
- I am an adviser to the Wiley Series in Communications Networking and Distributed Systems.
- I was formerly a member of the National e-Science Centre Scientific Advisory Board.
- I am a member of IFIP, TC6, WG6.1.
- I am a member of the technical advisory board for the École Polytechnique Fédérale de Lausanne (Information and Communications Department).
- I was the editor of a special issue of the Distributed Systems Engineering Journal.
- I was one of the guest editors for a special issue of the IEEE Journal on Selected Areas of Communication; this special issue was devoted to enabling platforms for multimedia applications.
- I was on the editorial board of the Distributed Systems Engineering Journal, co-published by the British Computer Society, the Institution of Electrical Engineers, and the Institute of Physics Publishing.
- Consultation on network and software engineering topics has been provided for C.E.R.N. (the European Center for Nuclear Research), the Jet Propulsion Laboratory, TRW Defense and Space Systems Group, and Ford Aerospace Western Development Laboratory.

Grant Reviewing

- Review progress of the SELFMAN FP6 STREP for the European Commission.
- Review progress of the ARTIST2 FP6 network of excellence for the European Commission.
- Member of the EPSRC College of Reviewers, reviewing approximately 12 proposals each year.
- Member of EPSRC funding panel May 2003, May 2004, September 2004, March 2005, April 2005, June 2005, October 2005, March 2006, September 2009.
- Occasional reviews for NSERC (Canada) and NOW (Netherlands).

Professional Societies

- Fellow, British Computer Society (BCS)

- *Fellow, Institution of Engineering and Technology (IET)*
- *Fellow, Royal Society of Edinburgh (RSE)*
- *Senior Member, Institute of Electronic and Electrical Engineers (IEEE)*
- *Member, Association for Computing Machinery (ACM)*
- *Member, UK Computing Research Committee (UKCRC)*

Extra-curricular Activities

- *I swim and cycle to maintain fitness.*
- *I was formerly an active triathlete, competing in races spanning the spectrum from sprint distance to Ironman distance. I also competed in road races ranging from 5Ks to marathons. I placed in my age group in these races more often than not.*
- *I have played euphonium and French horn in the Glasgow Computing Brass, an amateur brass quartet/quintet.*
- *I was the principal french horn for the HP Symphony Orchestra.*
- *I am a former member of the Oakland Symphony Chorus.*
- *I have performed with the San Francisco Sinfonia.*
- *I was a founding member and on the executive board of St. Mary's Chamber Choir, Ely. I have performed a variety of classical works, both as a tenor and a bass.*
- *I occasionally performed with the Ely Sinfonia (4th french horn).*

References

Available upon request.