

# Kevin Seppi

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POSITIONS AND APPOINTMENTS      **Brigham Young University, Department of Computer Science**, Provo, Utah  
Associate Professor      2008 - Present  
Assistant Professor      2005 - 2008

**BMC Software**, Austin, Tx  
Product Line Lead, Manager of Corporate Development and  
Director of Corporate Development      1995-2002

**University of Texas, Operations Research Department**, Austin, Texas  
Adjunct Lecturer (concurrent with IBM)      1994

**International Business Machines**, San Jose, California and Austin, Texas  
Programmer, Ph.D. at the University of Texas,  
Associate Programmer and Senior Programmer      1983-1995

EDUCATION      **University of Texas**, Austin, Texas  
Ph.D., Operations Research, 1990  
IBM "Resident Studies" (Tuition, full salary, moving, books, etc.)  
Dissertation: A Bayesian Approach to Selected Database Issues

**Santa Clara University**, Santa Clara, California  
M.S., Computer Science and Engineering, 1986

**Brigham Young University**, Provo, Utah  
B.S., Computer Science, 1983

## PUBLICATIONS      **Journal Publications**

Jonathan L. Krein, Lutz Prechelt, Natalia Juristo, Aziz Nanthaamornphong, Jeffrey C. Carver, Sira Vegas, Charles D. Knutson, Kevin D. Seppi, and Dennis L. Eggett, "A Multi-Site Joint Replication of a Design Patterns Experiment using Moderator Variables to Generalize across Contexts", *IEEE Transactions on Software Engineering*, vol. 42, no. 4, pp. 302-321, April 1 2016.

Kevin Cook, Everett Bryan, Huili Yu, He Bai, Kevin Seppi, and Randy Beard, "Intelligent Cooperative Control for Urban Tracking with Unmanned Air Vehicles", *Journal of Intelligent and Robotic Systems*, Springer, Netherlands, Vol. 74, No. 1-2, 2014, pp. 251-267.

Paul Felt, Eric Ringger, Kevin Seppi, Kristian Heal, Robbie Haertel, and Deryle Lonsdale, "Evaluating machine-assisted annotation in under-resourced settings", *Language Resources and Evaluation*, December 2014, Springer, Netherlands, pp. 561-599.

M. Gardner, A. McNabb, and K. Seppi, "A Speculative Approach to Parallelization in Particle Swarm Optimization", In *Swarm Intelligence*, 2012, Springer, New York, pp. 1-40.

Christopher K. Monson and Kevin D. Seppi, "A Graphical Model for Evolutionary Optimization", In *Evolutionary Computation*, Vol. 16, No. 3, 2009, MIT Press Boston, pp. 289-313.

Jesse Mecham, Mark Clement, Todd Freestone, Quinn Snell, Kevin Seppi, Keith Crandall, "Jump-starting Phylogenetic Analysis", In *International Journal of Bioinformatics Research and Applications*, Vol. 2, No. 1, 2006, pp. 19-35.

Kevin Seppi, Michael Jones, and Peter Lamborn, “Guided Model Checking with a Bayesian Meta-heuristic”, In *Fundamenta Informaticae*, Vol. 70, No.1-2, 2006, pp. 111-126.

David Wingate and Kevin D. Seppi, “Prioritization Methods for Accelerating MDP Solvers”, In *Journal of Machine Learning Research*, 6 2005, MIT Press, Cambridge, Massachusetts, pp. 851-881.

Kevin Seppi, J. Wesley Barnes and Carl Morris, “A Bayesian Approach to Database Query Optimization”, In *ORSA Journal on Computing*, 5(4), fall 1993, pp. 410-419.

Kevin Seppi, “Simplified hidden Line Removal” In *Journal of Pascal and Ada*, 2(1), February 1983.

### Refereed Conference Publications

Daqing Yi, Thomas M. Howard, Michael A. Goodrich, and Kevin D. Seppi, “Expressing Homotopic Requirements for Mobile Robot Navigation through Natural Language Instructions”, To appear in *The Proceedings of the International Conference on Intelligent Robots and Systems*, Daejeon, Korea, October 2016.

Daqing Yi, Michael A. Goodrich, Thomas M. Howard, and Kevin D. Seppi, “Topology-Aware RRT\* for Parallel Optimal Sampling in Topologies”, To appear *The Proceedings of the International Conference on Systems, Man, and Cybernetics*, Budapest, Hungary, October 2016.

Forough Poursabzi-Sangdeh, Jordan Boyd-Graber, Leah Findlater and Kevin Seppi, “ALTO: Active Learning with Topic Overviews for Speeding Label Induction and Document Labeling”, To appear in *The Proceedings of the Association for Computational Linguistics*, Berlin, Brandenburg, August 2016.

Alison Smith, Tak Yeon Lee, Forough Poursabzi-Sangdeh, Jordan Boyd-Graber, Kevin Seppi, Niklas Elmqvist and Leah Findlater, “Human-Centered and Interactive: Expanding the Impact of Topic Models”, In *CHI Human Centred Machine Learning Workshop*, San Jose, California, May 2016.

Michael Jones, Kevin Seppi and Dan Olsen, “Rapid prototyping of physical interactive devices”, In *The Proceedings of the ACM Human-Computer Interaction 2016*, San Jose, California, May 2016.

Daqing Yi, Michael A Goodrich, and Kevin D. Seppi, “Homotopy-Aware RRT\*: Toward Human-Robot Topological Path-Planning”, In *The proceedings of The Eleventh ACM/IEEE International Conference on Human Robot Interaction*, Christchurch, New Zealand, March 2016.

He Bai, Kevin Cook, Huili Yu, Kyle Ingersoll, Randy Beard, Kevin Seppi and Sharath Avadhanam, “Improving cooperative tracking of an urban target with target motion model learning”, In *The proceedings of the 2015 IEEE 54th Annual Conference on Decision and Control (CDC)*, Osaka, Japan, December 2015.

Paul Felt, Eric K. Ringger, Jordan Boyd-Graber and Kevin Seppi, “Making the Most of Crowdsourced Document Annotations: Confused Supervised LDA”, In *The proceedings of the Conference on Computational Natural Language Learning (CoNLL)* (best paper award winner), Beijing, China, July 2015.

Daqing Yi, Michael A Goodrich, and Kevin Seppi, “MORRF: sampling-based multi-objective motion planning”, In *The proceedings of the 24th International Joint Conference on Artificial Intelligence*, Buenos Aires, Argentina, July 2015.

Daqing Yi, Kevin Seppi and Michael A Goodrich, “Input-to-State Stability Analysis on Particle Swarm Optimization”, In *The proceedings of the Genetic and Evolutionary Computation Conference*, Madrid, Spain, July 2015.

Thang Nguyen, Jordan Boyd-Graber, Jeff Lund, Kevin Seppi, and Eric Ringger, “Is your anchor going up or down? Fast and accurate supervised topic models”, In *The proceedings of the Confer-*

ence of the North American Association for Computational Linguistics, Denver, Colorado, May 2015.

Paul Felt, Eric Ringger, Jordan Boyd-Graber, and Kevin Seppi, “Early Gains Matter: A Case for Preferring Generative over Discriminative Crowdsourcing Models”, In *The proceedings of the Conference of the North American Association for Computational Linguistics*, Denver, Colorado, May 2015.

Robbie Haertel, Eric K Ringger, Paul Felt, and Kevin Seppi, “An Analytic and Empirical Evaluation of Return-on-Investment-Based Active Learning”, In *The proceedings of the 9th Linguistic Annotation Workshop held in conjunction with the conference of the North American Association for Computational Linguistics*, Denver, Colorado, May 2015.

Paul Felt, Kevin Black, Eric Ringger, Kevin Seppi, “On Multinomial vs. Log-linear Crowdsourcing Models with Mean-field Variational Inference”, In *The Proceedings of the NIPS 2014 Workshop on Crowdsourcing and Machine Learning*, Montreal, Quebec, December 2014.

Christopher K. Monson, and Kevin D. Seppi, “Confident but Weakly-Informed: Tackling PSO’s Momentum Conundrum”, In *The Proceedings of the IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2014)*, Orlando, Florida, December 2014.

Yi Daqing, M.A. Goodrich, K.D. Seppi, “Informative path planning with a human path constraint”, In *The Proceedings of the 2014 IEEE International Conference on Systems, Man and Cybernetics (SMC)*, October, 2014.

Christopher K. Monson, and Kevin D. Seppi, “Under-informed momentum in PSO” (abstract), In *The Proceedings of the 2014 Conference Companion on Genetic and Evolutionary Computation (GECCO 2014)*, Vancouver, British Columbia, 2014.

Andrew McNabb and Kevin Seppi, “Serial PSO Results Are Irrelevant in a Multi-core Parallel World”, In *The Proceedings of the IEEE Congress on Evolutionary Computation (CEC 2014)*, Beijing, China, 2014.

Kevin Black, Eric Ringger, Paul Felt, Kevin Seppi, Kristian Heal, Deryle Lonsdale, “Evaluating Lemmatization Models for Machine-Assisted Corpus-Dictionary Linkage”, In *The Proceedings of the Ninth International Conference on Language Resources and Evaluation (LREC’14)*, Reykjavik, Iceland, 2014.

Paul Felt, Eric. K. Ringger, Kevin Seppi, and Robbie A. Haertel, “Momresp: A Bayesian Model for MultiAnnotator Document Labeling”, In *The Proceedings of the Ninth International Conference on Language Resources and Evaluation (LREC’14)*, Reykjavik, Iceland, 2014.

Paul Felt and Eric Ringger and Kevin Seppi and Kristian Heal, “Using Transfer Learning to Assist Exploratory Corpus Annotation”, In *The Proceedings of the Ninth International Conference on Language Resources and Evaluation (LREC’14)*, Reykjavik, Iceland, 2014.

Kevin Cook, Everett Bryan, Huili Yu, He Bai, Kevin Seppi, and Randy Beard, “Intelligent Cooperative Control for Urban Tracking with Unmanned Air Vehicles”, In *The Proceedings of International Conference on Unmanned Aircraft Systems*, Atlanta, GA, USA, 2013.

Joshua Hansen, Eric K. Ringger, and Kevin D. Seppi, “Probabilistic Explicit Topic Modeling Using Wikipedia”, In *The Proceedings of Language Processing and Knowledge in the Web*, 25th International Conference GSCL 2013, Springer Berlin Heidelberg, 2013.

Daniel D. Walker, Kevin Seppi and Eric K. Ringger, “Evaluating Supervised Topic Models in the Presence of OCR Errors”, In *The Proceedings of Document Recognition and Retrieval XX*, 2013 (Best student paper), 2013.

A. McNabb and K. Seppi, “The Apiary Topology: Emergent Behavior in Communities of Particle Swarms”, In *The Proceedings of Parallel Problem Solving from Nature-PPSN XII*, 2012.

A. McNabb, J. Lund and K. Seppi, “Mrs: MapReduce for Scientific Computing in Python”, In *The Proceedings of PyHPC 2012 : Python for High Performance and Scientific Computing*, SuperComputing, 2012.

- P Felt and E Ringger and K Seppi, “First Results in a Study Evaluating Pre-labeling and correction Propagation for Machine-Assisted Syriac Morphological Analysis”, In *The Proceedings of the International Conference on Language Resources and Evaluation (LREC) 2012*, 2012.
- Daniel D. Walker, Kevin Seppi and Eric K. Ringger, “Topics Over Nonparametric Time: A Supervised Topic Model Using Bayesian Nonparametric Density Estimation”, In *The Proceedings of the 9th Bayesian Modelling Applications Workshop at Uncertainty in AI, UAI*, 2012.
- Kristine Monteith, James L. Carroll, Kevin Seppi, and Tony Martinez, “Turning Bayesian Model Averaging Into Bayesian Model Combination”, In *The Proceedings of the 2011 International Joint Conference on Neural Networks (IJCNN 2011)*, San Jose, California, 2011.
- David Wilcox, Andrew McNabb and Kevin Seppi, “Solving virtual machine packing with a Re-ordering Grouping Genetic Algorithm” In *The Proceedings of the IEEE Congress on Evolutionary Computation (CEC 2011)*, 2011.
- Eric Ringger, Kevin Seppi, Kristian Heal, Deryle Lonsdale, Paul Felt, Robbie Haertel, and Peter McClanahan, “Computational Models of Syriac and How to Train Them”, In *The Proceedings of the North American Syriac Symposium*, 2011.
- Matthew Gardner, Joshua Lutes, J. Lund, J. Hansen, Dan Walker, Eric Ringger and Kevin Seppi, “The Topic Browser: An Interactive Tool for Browsing Topic Models”, In *The Proceedings of the Challenges of Data Visualization Workshop at Neural Information Processing Systems*, 2010.
- David Wilcox, Andrew McNabb, Kevin Seppi and Kelly Flanagan, “Probabilistic Virtual Machine Assignment”, In *The Proceeding of the First International Conference on Cloud Computing, GRIDs, and Virtualization*, Lisbon, Portugal, 2010.
- Matthew Gardner, Andrew McNabb and Kevin Seppi, “Speculative Evaluation in Particle Swarm Optimization”, In *The Proceedings of the 11th International Conference on Parallel Problem Solving from Nature (PPSN’10)*, Krakow, Poland, 2010.
- Robbie Haertel, Paul Felt, Eric K. Ringger and Kevin Seppi, “Parallel Active Learning: Eliminating Wait Time with Minimal Staleness”. In *The Proceedings of the NAACL HLT 2010 Workshop on Active Learning for Natural Language Processing (ALNLP 2010)*, Los Angeles, California, 2010.
- Marc Carmen, Paul Felt, Robbie Haertel, Deryle Lonsdale, Peter McClanahan, Owen Merklings, Eric Ringger, and Kevin Seppi, “Tag Dictionaries Accelerate Manual Annotation”, In *The Proceedings of the Seventh International Conference on Language Resources and Evaluation (LREC 2010)*, Valletta, Malta, 2010.
- Paul Felt, Owen Merklings, Marc Carmen, Eric Ringger, Warren Lemmon, Jeremy Sandberg, Kevin Seppi, and Robbie Haertel, “CCASH: A Web Application for Efficient, Distributed Language Resource Development”, In *The Proceedings of the Seventh International Conference on Language Resources and Evaluation (LREC 2010)*, Valletta, Malta, 2010.
- Peter McClanahan, George Busby, Robbie Haertel, Kristian Heal, Deryle Lonsdale, Kevin D. Seppi, and Eric K. Ringger, “A Probabilistic Morphological Analyzer for Syriac”, In *The Proceedings of the 2010 Conference on Empirical Methods in Natural Language Processing (EMNLP 2010)*, Cambridge, Massachusetts, 2010.
- Thomas Packer, Joshua Lutes, Aaron Stewart, David Embley, Eric Ringger, Kevin Seppi and Lee Jensen, “Extracting Person Names from Diverse and Noisy OCR text”, In *The Proceedings of the 4th Workshop on Analytics for Noisy Unstructured Text Data (AND 2010)*, Toronto, ON, Canada, 2010.
- Neil Toronto, Bryan S. Morse, Kevin Seppi and Dan Ventura, “Super-resolution via Recapture and Bayesian Effect Modeling”, In *The Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition (CVPR 2009)*, Miami, FL., 2009.
- Andrew McNabb, Matthew Gardner, and Kevin Seppi, “An Exploration of Topologies and Communication in Large Particle Swarms”, In *The Proceedings of the IEEE Congress on Evolutionary*

*Computation (CEC 2009)*, Trondheim, Norway, 2009.

Robbie Haertel, Kevin Seppi, Eric Ringger, and James Carroll, “Return on Investment for Active Learning”, In *The Proceedings of the NIPS 2008 Workshop on Cost-Sensitive Machine Learning*, 2008.

Robbie Haertel, Eric Ringger, Kevin Seppi, James Carroll, and Peter McClanahan, “Assessing the Costs of Sampling Methods in Active Learning for Annotation”, In *The Proceedings of the Conference of the Association of Computational Linguistics (ACL-NAACL: HLT 2008)*, 2008.

Eric Ringger, Marc Carmen, Robbie Haertel, Noel Ellison, Kevin Seppi, Deryle Lonsdale, Peter McClanahan, and James Carroll, “Assessing the Costs of Machine-Assisted Corpus Annotation through a User Study”, In *The Proceedings of the Language Resources and Evaluation Conference (LREC)*, 2008.

James L. Carroll, Robbie Haertel, Peter McClanahan, Eric Ringger, and Kevin Seppi, “Modeling the Annotation Process for Ancient Corpus Creation”, In *The Proceedings of the Conference on Electronic Corpora of Ancient Languages (ECAL)*, 2007.

Christopher K. Monson, Kevin D. Seppi, and James L. Carroll, “A Utile Function Optimizer”, In *The Proceedings of the IEEE Congress on Evolutionary Computation (CEC 2007)*, Singapore, 2007.

Andrew W. McNabb, Christopher K. Monson, and Kevin D. Seppi, “Parallel PSO Using MapReduce”, In *The Proceedings of the IEEE Congress on Evolutionary Computation (CEC 2007)*, Singapore, 2007.

Andrew W. McNabb, Christopher K. Monson and Kevin D. Seppi, “MRPSO: MapReduce Particle Swarm Optimization” (abstract), In *The Proceedings of the 2014 Conference Companion on Genetic and Evolutionary Computation (GECCO 2007)*, London, England, United Kingdom, 2007.

Neil Toronto, Bryan Morse, Dan Ventura, and Kevin Seppi, “The Hough Transform’s Implicit Bayesian Foundation”, In *The Proceedings of the 2007 IEEE International Conference on Image Processing*, San Antonio, Texas, 2007.

James L. Carroll and Kevin D. Seppi, “No-Free-Lunch and Bayesian Optimality”, In *The Proceedings of the International Joint Conference on Neural Networks Workshop on Meta-Learning*, 2007.

James L. Carroll, Christopher K. Monson, and Kevin D. Seppi, “A Bayesian CMAC for High Assurance Supervised Learning”, In *The Proceedings of the International Joint Conference on Neural Networks Workshop on Applications of Neural Networks in High-Assurance Systems*, 2007.

Eric Ringger, Peter McClanahan, Robbie Haertel, George Busby, Marc Carmen, James Carroll, Kevin Seppi, and Deryle Lonsdale, “Active Learning for Part-of-Speech Tagging: Accelerating Corpus Annotation”, In *The Proceedings of the Linguistic Annotation Workshop*, Prague, Czech Republic, 2007.

Tran, N., Giraud-Carrier, C., Seppi, K. and Warnick, S, “Cooperation-based Clustering for Profit-maximizing Organizational Design”, In *The Proceedings of the International Joint Conference on Neural Networks (IJCNN06)*, Vancouver, B.C., 2006.

Christopher Monson and Kevin Seppi, “Adaptive Diversity in PSO”, In *The Proceedings of the Genetic and Evolutionary Computation Conference (GECCO 2006)*, Seattle, Washington, 2006.

Patrick Mullen, Christopher Monson, and Kevin Seppi, “Particle Swarm Optimization in Dynamic Pricing”. In *The Proceedings of the IEEE Congress on Evolutionary Computation (CEC 2006)*, Vancouver, B.C., 2006.

N. Tran, W. Weyerman, C. Giraud-Carrier, K. Seppi, S. Warnick, and R. Johnson, “Studies in the Dynamics of Economic Systems”, In *The Proceedings of the IEEE Conference on Control Applications*, 2005.

- P. Mullen, K. Seppi, and S. Warnick, "Dynamic Pricing on Commercial Websites: A Computationally Intensive Approach", In *Proceedings of the 4th International Conference on Computational Intelligence in Economics and Finance*, Salt Lake City, UT., 2005.
- N. Tran, C. Giraud-Carrier, K. Seppi and S. Warnick, "Implications of the Small Gain Theorem in the Design of an Economic Laboratory", In *The Proceedings of the 4th International Conference on Computational Intelligence in Economics and Finance*, Salt Lake City, 2005.
- N. Tran, D. West, C. Giraud-Carrier, K. Seppi, S. Warnick and R. Johnson, "The Value of Cooperation Within a Profit-Maximizing Organization", In *The Proceedings of the 4th International Conference on Computational Intelligence in Economics and Finance*, Salt Lake City, 2005.
- Christopher Monson and Kevin Seppi, "Linear Equality Constraints and Homomorphous Mappings in PSO", In *Proceedings of the IEEE Congress on Evolutionary Computation (CEC 2005)*, Edinburgh, UK., 2005.
- Christopher Monson and Kevin Seppi, "Exposing origin-seeking bias in PSO", In *The Proceedings of the Conference on Genetic and Evolutionary Computation (GECCO 2005)*, Washington D.C., 2005.
- Christopher Monson and Kevin Seppi, "Bayesian Optimization Models for Particle Swarms", In *The Proceedings of the Conference on Genetic and Evolutionary Computation (GECCO 2005)*, Washington D.C., 2005.
- James Carroll and Kevin Seppi, "Task Similarity Measures for Transfer in Reinforcement Learning Task Libraries", In *The Proceedings of the International Joint Conference on Neural Networks*, 2005, Montreal, Canada, 2005.
- David Wingate, Nathaniel Powell, Quinn Snell, and Kevin Seppi, "Prioritized Multiplicative Schwarz Procedures for Solutions to General Linear Systems", In *The Proceedings of the International Parallel and Distributed Processing Symposium (IPDPS)*, Denver, Colorado, 2005.
- Mark Clement, Quinn Snell, Keith Crandall, and Kevin Seppi, "Jumpstarting Phylogenetic Analysis", In *The Proceedings of the Biotechnology and Bioinformatics Symposium (BIOT)*, September 2004.
- David Wingate and Kevin D. Seppi, "P3vi: A Partitioned, Prioritized, Parallel Value Iterator", In *The Proceedings of the International Conference on Machine Learning*, Banff, Canada, 2004.
- Christopher K. Monson and Kevin D. Seppi, "The Kalman Swarm", In *The Proceedings of the Genetic and Evolutionary Computation Conference (GECCO)*, Seattle, Washington, 2004.
- Christopher K. Monson and Kevin D. Seppi, "Improving on the Kalman Swarm: Extracting Its Essential Characteristics", In *Late Breaking Papers of the Genetic and Evolutionary Computation Conference*, Seattle, Washington, 2004.
- David Wingate and Kevin D. Seppi, "Cache Performance of Priority Metrics and MDP Solvers", In *The Proceedings of the 2004 AAAI Workshop on Learning and Planning in Markov Processes*, San Jose, California, 2004.
- James L. Carroll and Kevin D. Seppi, "A Bayesian Technique for Task Localization in Multiple Goal Markov Decision Processes", In *The Proceedings of the International Conference on Machine Learning and Applications*, Louisville, Kentucky, 2004.
- Christopher K. Monson, David Wingate, Kevin D. Seppi, and Todd S. Peterson, "Variable Resolution Discretization in the Joint Space", In *The Proceedings of the International Conference on Machine Learning and Applications*, Louisville, Kentucky, 2004.
- David Wingate and Kevin Seppi, "Efficient Value Iteration Using Partitioned Models" (Best Paper), In *The Proceeding of the International Conference on Machine learning Applications*, Los Angeles, California, 2003.
- James Carroll and Kevin Seppi, "Reinforcement Learning Task Clustering (RLTC)", In *The Proceedings of the International Conference on Machine Learning Applications*, Los Angeles, Cal-

ifornia, 2003.

#### **Non-Refereed Conference Publications and Technical Reports:**

D. Spuler, J. Kushner, and K. Seppi, "Empowering CEMS via Agent Technology", In *BMC Tech News*, July-September 1998.

M. Dockter, J. Farber, and K. Seppi, "Facility for the Intelligent Selection of Information Objects (PERSONA)", IBM Santa Teresa Lab Technical Report 03.459, January 1993.

M. Dockter, J. Farber, and K. Seppi, "Method for Storing and Retrieving Heterogeneous Classification Systems", IBM Santa Teresa Lab Technical Report 03.447, April 1992.

M. Dockter, J. Farber, and K. Seppi, "Grinding: A Facility for the Automatic Association of Heterogeneous Objects", IBM Santa Teresa Lab Technical Report 03.459, April 1992.

M. Dockter, A. Peterson, and K. Seppi, "Knowledge Mining Center Phase One: A Computer Supported Collaborative Workspace", IBM Santa Teresa Lab Technical Report 03.434, May 1992.

C. Christiansen, J. Glosup, C. Morris and K. Seppi, "An Overview of the 'S' and 'XLISP-STAT' Statistical Programming Languages (Updated)", In *The Proceedings of the IBM Reliability & Applied Statistics ITL*, IBM East Fishkill, New York, May 13-16 1991.

Kevin Seppi, "A Bayesian Approach to Selected Database Issues", Ph.D. Dissertation at the University of Texas, Austin, Texas, August 1990.

K. Seppi, "Selecting Algorithms in the Presence of Uncertainty", In *IBM Technical Disclosures Bulletin*, 1990.

C. Christiansen, J. Glosup, C. Morris and K. Seppi, "An Overview of the 'S' and 'XLISP-STAT' Statistical Programming Languages", University of Texas Center for Statistical Sciences Technical Report #89, Also presented at the Statistical Computation Conference at the University of Texas, May 18 1990.

K. Seppi, J. Barnes and C. Morris, "A Bayesian Approach to Query Optimization in Large Scale Data Bases", Graduate Program in Operations Research Technical Report OR89-19, The University of Texas at Austin. Austin, Texas, December 1989.

K. Seppi, and D. Haderle, "Index Mass Delete", In *IBM Technical Disclosures Bulletin*, August 1989.

K. Seppi, T. Malkemus, R. Crus, and D. Haderle, "Conditional Non-root Locking", In *IBM Technical Disclosures Bulletin*, August 1989.

#### **PATENTS**

James L. Martin, Abolfazl Sirjani, Kevin D. Seppi, Lisa S. Keeler, US Patent 6,029,178 "Enterprise data movement system and method which maintains and compares edition levels for consistency of replicated data", March 31, 1998.

James L. Martin, Abolfazl Sirjani, Kevin D. Seppi, Lisa S. Keeler, US Patent 6,035,307 "Enterprise data movement system and method including opportunistic performance of utilities and data move operations for improved efficiency", March 30, 1998.

James L. Martin, Abolfazl Sirjani, Kevin D. Seppi, Lisa S. Keeler, US Patent 6,016,501 "Enterprise data movement system and method which performs data load and changed data propagation operations", March 30, 1998.

Michael J. Dockter, Joel F. Farber, Kevin D. Seppi, US Patent 6,208,989 "Facility for the intelligent selection of information objects", February 14, 1997.

Michael J. Dockter, Joel F. Farber, Kevin D. Seppi, David W. Tolleson US Patent 5,687,367 "Facility for the storage and management of connection (connection server)", October 30, 1996.

Michael Jon Dockter, Joel Frank Farber, Michael Leon Pauser, Kevin Darrell Seppi, David Wayne

Tolleson, US Patent 5,640,608 “System and method for block generation of monotonic globally unique tag values, where restart tag value due to failure starts at highest value of previously generated tag values”, March 16, 1995.

Ronald E. Bingham, Harry R. Campbell, Michael J. Dockter, Joel F. Farber, Kevin D. Seppi, US Patent 5,745,895 “Method for association of heterogeneous information”, June 21, 1994.

Michael J. Dockter, Joel F. Farber, Kevin D. Seppi, US Patent 5,854,923 “Facility for the intelligent selection of information objects (persona)”, June 21, 1994.

Michael J. Dockter, Joel F. Farber, Kevin D. Seppi US Patent 5,678,038 “Storing and retrieving heterogeneous classification systems utilizing globally unique identifiers”, June 21, 1994.

Michael J. Dockter, Joel F. Farber, Jeffrey D. Gordon, Kevin D. Seppi, James C. Kleewein, Patent 5,608,900 “Generation and storage of connections between objects in a computer network”, June 21, 1994.

Ronald E. Bingham, Michael J. Dockter, Joel F. Farber, Kevin D. Seppi, US Patent 5,557,790 “Facility for the generic storage and management of multimedia objects”, June 21, 1994.

Michael J. Dockter, Joel F. Farber, James C. Kleewein, Kevin D. Seppi, David W. Tolleson, US Patent 5,434,978 “Communications interface employing unique tags which enable a destination to decode a received message structure”, February 18, 1994.

Michael J. Dockter, Charles L. Haug, Kevin D. Seppi, US Patent 5,420,801 “System and method for synchronization of multimedia streams”, November 13, 1992.

Ronald E. Bingham, Michael J. Dockter, Joel F. Farber, Kevin D. Seppi, US Patent 5,414,841 “Computerized system for representing data items using token identifiers”, October 19, 1992.

#### FUNDED RESEARCH

NSF program: III, *Closing the User-Model Loop for Understanding Topics in Large Document Collections*, Eric Ringger, Kevin Seppi, Jordan Boyd-Graber, Leah Findlater, \$550,000 (Brigham Young University), \$1,200,000 (Total) for the period 08/01/2014–07/31/2018.

NSF program: CHS, *Design Tools for Physical Computing Objects*, Dan Olsen, Kevin Seppi and Mike Jones, \$1,123,577, for the period 08/01/2014–07/31/2018.

NSF program: DUE, *A New Curriculum in Applied and Computational Mathematics*, Jeffrey Humpherys, Richard Evans, Kevin Seppi and Tyler Jarvis, \$599,752, for the period 09/01/2013–09/01/2017.

*Intelligent Controller Development for Cooperative UAV Missions*, Kevin Seppi and Randy Beard, Phase 2 Air Force SBIR, \$180,000, for the period 10/01/2013–9/30/2016.

*Intelligent Controller Development for Cooperative UAV Missions*, Randy Beard and Kevin Seppi, Phase 1 Air Force SBIR, \$45,000, for the period 06/01/2012–12/01/2012.

*Optimal Virtual Machine Assignment*, Kevin Seppi, BYU Office of Information Technology, \$48,000, 2010.

*Saving the Past on a Budget*, Eric Ringger and Kevin Seppi, BYU Mentored Environment Grant. \$20,000, 2009.

*Accelerating the construction of accurate learned models of annotated natural language text*, Eric Ringger and Kevin Seppi, BYU Mentored Environment Grant. \$18,000, 2008.

*A Computational Economics Learning Laboratory*, Kevin Seppi and Sean Warnik, funded by the Kevin and Debra Rollins Center for EBusiness, \$5,000, January 1, 2005–December 31, 2005.

*A Computational Economics Learning Laboratory*, Kevin Seppi and Sean Warnik, funded by the Kevin and Debra Rollins Center for EBusiness, \$10,000, May 1, 2004–December 31, 2005.

RECENT  
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SERVICE

#### Journals



IEEE Transactions on Evolutionary Computation, Reviewer.  
IEEE Transactions on Systems, Man, and Cybernetics–Part B: Cybernetics, Reviewer.  
Journal of Experimental & Theoretical Artificial Intelligence, Reviewer.  
Information Sciences, Reviewer.  
Swarm Intelligence, Reviewer.

## **Conferences**

IEEE Congress on Evolutionary Computation 2016, Program Committee.  
Genetic and Evolutionary Computation Conference (GECCO) 2016, Program Committee.  
Conference on Swarm Intelligence (ANTS) 2016, Program Committee.  
International Conference on Swarm Intelligence 2016, Program Committee.  
IEEE Congress on Evolutionary Computation 2015, Program Committee.  
Genetic and Evolutionary Computation Conference (GECCO) 2015, Program Committee.  
IEEE Congress on Evolutionary Computation 2014 (WCCI), Program Committee.  
Genetic and Evolutionary Computation Conference (GECCO) 2014, Program Committee.  
Conference on Swarm Intelligence (ANTS) 2014, Program Committee.  
Genetic and Evolutionary Computation Conference (GECCO) 2013, Program Committee.  
IEEE Congress on Evolutionary Computation 2012 (WCCI), Program Committee.  
Genetic and Evolutionary Computation Conference (GECCO) 2012, Program Committee.  
Conference on Swarm Intelligence (ANTS) 2012, Program Committee.  
IEEE Congress on Evolutionary Computation (CEC) 2011, Program Committee.  
Genetic and Evolutionary Computation Conference (GECCO) 2011, Program Committee.  
IEEE Congress on Evolutionary Computation 2010 (WCCI), Program Committee.  
Genetic and Evolutionary Computation Conference (GECCO) 2010, Program Committee.  
Conference on Swarm Intelligence (ANTS) 2010, Program Committee.  
IEEE Congress on Evolutionary Computation (CEC) 2009, Program Committee.  
International Conference on Machine Learning and Applications 2008, Steering Committee.  
IEEE Congress on Evolutionary Computation (CEC) 2007, Program Committee.  
IEEE Congress on Evolutionary Computation (CEC) 2007 Special Session on Evolved Art and Music, Co-chair.  
International Conference on Machine Learning and Applications 2007, Steering Committee.  
International Conference on Machine Learning and Applications 2006, Steering Committee.  
International Conference on Machine Learning and Applications 2005, Steering Committee.  
International Conference on Machine Learning and Applications 2004, Steering Committee.