YARDEN LIVNAT

Research Computer Scientist Scientific Computing and Imaging Institute University of Utah 72 S Central Campus Drive Salt Lake City, UT 84112 (801) 585-1473 <u>yarden@sci.utah.edu</u> www.sci.utah.edu/~yarden

EDUCATION

- 1999 Ph.D. Computer Science, University of Utah, Salt
 - Lake City, Utah
- 1991 M.Sc. Computer Science (cum laude), Hebrew University, Jerusalem, Israel
- 1982 B.Sc. Computer Science, Ben-Gurion University, Beer-Sheva, Israel

PROFESSIONAL AFFILIATIONS

2003 - present	Research	Computer S	Scientist, S	CI Institute,	University	of Utah
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- 2013 present Adjunct Assistant Professor, School of Medicine, University of Utah
- 2013 2015 Research Assistant Professor, School of Computing, University of Utah
- 2002 2003 Research Assistant Professor, School of Computing, University of Utah
- 1995 2001 Research Associate and Postdoc Fellow, SCI Institute, University of Utah
- 1995Research Internship, Advance Computation Lab, Los Alamos National Lab
- 1991 1994 Research Assistance, Computer Science Department, University of Utah
- 1989 1991 Research Assistance, Hebrew University, Israel
- 1982 1988 Captain, Software Team Leader, Israel Defense Forces, Israel

HONORS

- 2017 NERSC Science Achievement Award: Award for Innovative Use of HPC
- 2012 Outstanding Research Article in Biosurveillance (Scientific Achievement) selected from any related journal publications since 2010, International Society of Disease Surveillance, 2012
- 2011 Homer R. Warren paper award, American Medical Informatics Association (AMIA) 2011
- 1998 Best paper award, IEEE Visualization, 1998

JOURNAL PAPERS

- 1. Liu S, Bremer PT, Thiagarajan JJ, Srikumar V, Wang B, Livnat Y, Pascucci V. "Visual Exploration of Semantic Relationships in Neural Word Embeddings". IEEE Trans. Vis. Comp. Graph, 24(1) pp. 553-562, 2018.
- 2. Roosan D, Del Fiol G, Butler J, Livnat Y, Mayer J, Samore M, Jones M, Weir C. "Feasibility of population health analytics and data visualization for decision support in the infectious diseases domain. A pilot study". Applied Clinical Informatics. 2016;7(2):604-23.
- 3. H. S. Kramer, B. S. Gibson, Y. Livnat, A. Brody, I. Thraen, R. Rupper, "Evaluation of an Electronic Module for Reconciling Medications in Home Health Plans of Care", Applied Clinical Informatics 7(2):412–424, 2016.
- 4. K. Doing-Harris, Y. Livnat, S. Meystre, "Automated Concept and Relationship Extraction for the Semi-Automated Ontology Management (SEAM) System", JBMS, Vol. 6. pp. 1-15, 2015
- P. Gesteland, Y. Livnat, N. Galli, M. H. Samore, A. V. Gundlapalli. "The EpiCanvas Infectious Disease Weather map: An Interactive Visual Exploration of Temporal Correlations". Journal of the American Medical Informatics Association (JAMIA), Vol. 9, pp. 954-959, 2012.
 [ISDS Award for Outstanding Research Article in Biosurveillance (Scientific Achievement) ISDS 2012]

- 6. G. Draper, Y. Livnat, R. Riesenfeld. "A Survey of Radial Methods for Information Visualization". IEEE Transactions on Visualization and Computer Graphics 2009
- 7. S. Foresti, J. Agutter, Y. Livnat, S. Moon, R. Erbacher. "Visual Correlation of Network Alerts" IEEE Computer Graphics and Applications, Vol 26(2), March 2006.
- 8. Y. Livnat, J. Agutter, S. Moon and S. Foresti, *"Visual Correlation for Situational Awareness"*. Proceedings of the 2005 IEEE Symposium on Information Visualization, pp. 95-102, 2005
- S. Parker, M. Parker, Y. Livnat, P.P. Sloan, C.D. Hansen, P. Shirley. "Interactive Ray Tracing for Volume Visualization," IEEE Transactions on Visualization and Computer Graphics, Vol. 5, No. 3, pp. 238-250, July-September, 1999
- 10. F. Yu, Y. Livnat, C.R. Johnson. "An Automatic Adaptive Refinement and Derefinement Method for 3D Elliptic Problems". In Applied Numerical Mathematics, 1997
- Y. Livnat, H. Shen, C.R. Johnson. "A Near Optimal Isosurface Extraction Algorithm Using the Span Space." IEEE Transactions on Visualization and Computer Graphics, pp. 73-84, Vol. 2(1), 1996.
- 12. C.R. Johnson, D.M. Beazley, Y. Livnat, S.G. Parker, J.A. Schmidt, H.W. Shen, D. Weinstein. "Applications of Large-Scale Computing and Scientific Visualization in Medicine". In International Journal on Supercomputer Applications and High Performance Computing, 1996.

FULL PAPERS IN CONFERENCE PROCEEDINGS (Refereed Papers)

- Bhatia H, Jain N, Bhatele A, Livnat Y, Domke J, Pascucci V, Bremer PT. "Interactive Investigation of Traffic Congestion on Fat-Tree Networks Using TREESCOPE" IEEE EuroVis, 2018
- 2. W. Widanagamaachchi, Y. Livnat, P. Bremer, S. Duvall, V. Pascucci, "Interactive Visualization and Exploration of Patient Progression in Hospital Setting", AMIA Annual 2017
- 3. A. Bhatele, J. Yeom, N. Jain, C. Kuhlman, Y. Livnat, K. Bisset, L. Kake, M. Marathe, "Massively Parallel Simulations of Spread of Infectious Diseases over Realistic Social Networks", CCGRID 2017, (Winner of the 2017 NERSC Science Achievement Award)
- 4. Y. Livnat, B. Gibson, H. Kramer, A. Brody, I. Thraen, R. Rupper, "My List vs. the Other List: The Design of an Interactive Visual Interface for Medication Reconciliation", VAHC2016
- 5. A. Bhatele, N. Jain, Y. Livnat, V. Pascucci, P. Bremer, "Analyzing Network Health and Congestion in Dragonfly-based Systems", IPDPS 2016, pp. 93-102, 2016
- Roosan D, Samore M, Jones M. Livnat Y, Clutter J. "Big-Data Based Decision-Support Systems to Improve Clinicians' Cognition", IEEE Int. Conf. Healthc. Inform. pp. 285-288, 2016
- Y. Livnat, E. Jurrus, P. Gesteland, A. V. Gundlapalli, "The CommonGround Visual Paradigm for Biosurveillance", Workshop on Signature Discovery, Intelligence and Security Information, pp. 352-357, 2013.
- P. Gesteland, Y. Livnat, N. Galli, M. H. Samore, A. V. Gundlapalli. "The EpiCanvas Infectious Disease Weather map: An Interactive Visual Exploration of Temporal Correlations". AMIA 2011 Annual Symposium, 2011 (Winner of the Homer R. Warner Award)
- 9. Y. Al-Zokari, D. Schneider, D, Zeckzer, L. Guzman, Y. Livnat, H. Hagen. "Enhanced CakES representing Safety Analysis results of Embedded System". Risks Awareness and Management through Smart Solutions (RAMSS 2011), pp. 783-790, 2011
- 10. Yi Yang, Patric Keller, Yarden Livnat, Peter Liggesmeyer, "Improving Safety-Critical Systems by Visual Analysis" VLUDS'11, pp. 43-58, 2011
- Y. Livnat, Gesteland PH, Benuzillo J, Pettey W, Bolton D, Drews F, Kramer H, Samore MH. *"Epinome - A Novel Workbench for Epidemic Investigation and Analysis of Search Strategies in Public Health Practice"*. Proceedings of the Annual American Medical Informatics Association Symposium, pp 647-651, 2010 Nov 13;
- 12. G. Draper, Y. Livnat, R, Riesenfeld, "A Visual Query Language for Correlation Discovery and Management". Proc. Second Ann. Visual and Iconic Language Conf. pp. 14-23, 2008
- 13. Y. Livnat, J. Agutter, S. Moon, R. F. Erbacher and S. Foresti. "A Visualization Paradigm for

Network Intrusion Detection", In 6th IEEE System, Man and Cybernetics Information Assurance Workshop, pp. 92-99, West Point 2005 (nominated for best paper award).

- Y. Livnat, X. Tricoche. "Interactive Point Based Isosurface Extraction", Proceedings of the 2004 IEEE Visualization 2004, pp 457-464, 2004
- 15. Y. Livnat, C.D. Hansen, S.G. Parker, C.R. Johnson. "Isosurface extraction for large-scale datasets," In Proceedings of Scientific Visualization –Dagstuhl 2000, Edited by F. Post, 2001
- 16. S. Parker, P. Shirley, Y. Livnat, C. Hansen, P-P. Sloan, M. Parker. "Interacting with Gigabyte Volume Datasets on the Origin 2000", In The 41st Annual Cray User's Group Conference, 1999.
- 17. S. Parker, P. Shirley, Y. Livnat, C. Hansen, and P-P. Sloan. "Interactive Ray Tracing for Isosurface Rendering". IEEE Visualization '98, (Best Paper Award).
- 18. Y. Livnat, C.D. Hansen. "View Dependent Isosurface Extraction", IEEE Visualization '98, pp. 175-180. Oct 1998.
- 19. H.W. Shen, C.D. Hansen, Y. Livnat, C.R. Johnson. "Isosurfacing in Span Space with Utmost Efficiency". In IEEE Visualization '96, pp. 287-294. 1996.
- 20. J. Painter, H.P. Bunge, Y. Livnat. "Case Study: Mantle Convection Visualization on the Cray T3D." In IEEE Visualization `96, pp. 409-412. 1996

BOOK CHAPTERS

- Y. Livnat, S. Parker, C.R. Johnson. "Fast Isosurface Extraction Methods for Large Image Data Sets", Handbook of Medical Imaging: Processing and Analysis, 2nd Edition, Ch. 44, pp. 801-816, I. Bankman (ed.), Academic Press, 2008
- 2. Y. Livnat "*Accelerated Isosurface Extraction Approaches*." In The Visualization Handbook, C. Hansen and C. Johnson editors, Elsevier, pp. 39-55, 2005
- 3. Y. Livnat, C. Hansen, C. Johnson, "*Isosurface Extraction for Large-Scale Data Sets*", In Data Visualization The State of The Art, F. Post, G. Nielson, G. Bonneau editors, pp. 77-92, Kluwer Academic Publishers, 2003
- C.R. Johnson, Y. Livnat, L. Zhukov, D. Hart, G. Kindlmann. "Computational Field Visualization", In Mathematics Unlimited _ 2001 and Beyond, Vol. 2, Edited by B. Engquist and W. Schmid, Springer-Verlag, pp. 605-630. 2001

INVITED PAPERS

- Y. Livnat, T-M. Rhyne, M. H. Samore, "Epinome: A Visual-Analytics Workbench for Epidemiology Data," IEEE Computer Graphics and Applications, vol. 32, no. 2, pp. 89-95, Mar./Apr. 2012
- C.R. Johnson, D. Brederson, C. Hansen, M. Ikits, G. Kindlmann, Y. Livnat, S. Parker, D. Weinstein, R. Whitaker. "Computational Field Visualization", In Computer Graphics, Vol. 35, No. 4, pp. 5-9, 2001
- 3. C.R. Johnson, S.G. Parker, C. Hansen, G. Kindlmann, Y. Livnat. "Interactive Simulation and Visualization", In IEEE Computer, Vol. 32, No. 12, pp. 59-65. 1999

ABSTRACTS AND POSTERS

- 1. R. Rupper, B Gibson, S. Stoutenburg, H. Kramer, Y. Livnat. "Improved Information Management to Enhance Care Coordination for Rural Veterans", 20th Annual International Scientific Symposium on Improving the Quality and Value of Health Care, 2014 (submitted)
- K. Doing-Harris, N. Boonsirisumpun, K. C. Potter, Y. Livnat, S. Meystre, "Automated Concept and Relationship Extraction for Ontology Development", AMIA Fall Annual Symposium, 2013 p. 433, 2013
- 3. S. Meystre, K. Doing-Harris, N. Boonsirisumpun, K. C. Potter, Y. Livnat, "Semi-Automated Ontology Development System for Medically Unexplained Syndromes in the U.S. Veterans Population", AMIA Fall Annual Symposium, 2013 p. 998, 2013

- 4. A. Choudhury, K Potter, TM Rhyne, Y Livnat, C. R. Johnson, O. Alter. "Visualizing Global Correlation in Large-Scale Molecular Biological Data", BioVis, 2011
- 5. W. Pettey, Y. Livnat, M. Samore, W. Xu. "Workspace Crossover and Partnership Tension in Informatics Innovation", AMIA Fall Annual Symposium, 2011
- 6. W. Xu, Y. Livnat, W. Petty, J. Reid, C. Staes, M. T. Samore, RT. Rolfs, "Innovation Space and Stage for Public Health Informatics Research and Practice: A State Experience", 2011
- 7. H. Kramer, Y. Livnat, W. Pettey, J. Reid, R. Dzierzon, M. Samore. "Using Contextual Inquiry to Validate and Extend a Tool for Public Health Disease Outbreak Investigations", AMIA Fall Annual Symposium, 2011
- 8. J. Anderson, W. Xu, W. Pettey, Y. Livnat, J. Hall, R. Herlihy, M. Samore. "Contextual Inquiry of Enteric Disease Outbreak Investigation Processes to Improve Visualization Capacity for Public Health Surveillance", AMIA Annual Symposium, 2010
- 9. B. Nangle, K. Marti, Y. Livnat. "Understanding the Requirements for Data Visualization in Public Health Assessment". AMIA Annual Symposium, 2010
- 10. Y. Livnat, Per Gesteland, et al. "Epinome A Novel Workbench for Epidemic Investigation and Analysis of Search Strategies in Public Health Practice", American Medical Informatics Association, Spring Congress, Orlando, FL 2009 (2009)
- 11. W. Pettey, J. Benuzillo, B. Walker, A. Parks, H. Kramer, P. Gesteland, M. Rubin, F. Drews, Y. Livnat, M. Samore, "Using agent-based simulations of infectious disease spread to enhance public health decision support tools". American Public Health Association 173rd Annual Meeting 2009
- 12. J. Benuzillo, W. Pette, B. Walke, M. Rubin, Y. Livnat, A. Parks, P. Gesteland, M. Samore, "Description of an Electronic Tool Designed to Support Training, Decision making, and Policy-making in Public Health", American Medical Informatics Association, Spring Congress; Orlando, FL 2009
- 13. J. Benuzillo, A. Parks, B. Walker, W. Pettey, P. Gesteland, F. Drews, Y. Livnat, J. Koopman, M. Samore. "*Public Health Decision-Making Simulator*". PHIN Annual Conference 2009
- 14. S. Moon, Y. Livnat, J. Agutter, G. Draper, S. Foresti. "A Visualization Concept for Complex Data Analysis". IEEE Visualization 2005
- 15. Y. Livnat, J. Agutter, S. Foresti. "VisAlert and VisAware", Information Assurance Workshop '05, Philadelphia, Feb. 2005

TUTORIALS

- 1. S. Parker, M. Parker, Y. Livnat, P. Sloan, C. Hansen, P. Shirley. "Interactive ray tracing for volume visualization". In Proceeding of SIGGRAPH '05, ACM SIGGRAPH 2005 Courses, 2005.
- L. Ng, J. Cates, Y. Livnat, L. Ibanz. "Medical Visualization with ITK", Visualization course notes, IEEE Visualization 2003

TECHNICAL REPORTS

- 1. Y. Livnat, P. Gesteland, A. V. Gundlapalli. "Visual Correlation for the Early Detection of Infectious Disease Outbreaks", TATRC, 2008
- 2. Y. Livnat, X. Tricoche. "Shadows for Incomplete Point-based Isosurfaces", SCI Institute Technical Report, No. UUSCI-2005-001, University of Utah, 2005
- 3. Y. Livnat, C.D. Hansen. "Dynamic View Dependent Isosurface Extraction," SCI Institute Technical Report, No. UUSCI-2003-004, University of Utah, 2003.
- 4. Y. Livnat, X. Cavin, C. Hansen. "PHASE: Progressive Hardware Assisted IsoSurface Extraction Framework", SCI Institute Technical Report, No. UUSCI-2002-001, University of Utah, 2002
- 5. Y. Livnat. "NOISE, WISE and SAGE: Algorithms for Rapid Isosurface Extraction", SCI Institute Technical Report, December, 1999

 C.R. Johnson, D.M. Beazley, Y. Livnat, S.G. Parker, J.A. Schmidt, H.W. Shen, D.M. Weinstein. *Applications of Large-Scale Computing and Scientific Visualization in Medicine*. SCI Institute Technical Report, 1997

INVITED TALKS AND PRESENTATIONS

My list and your list: the design of an interactive visual interface for medication reconciliation

• Workshop on Visual Analytics in Healthcare, Chicago, 2016

Visual Exploration for Situational Awareness

• Goldman Sachs, SLC (live broadcast to London, Bangalore, NYC and Austin Texas), 2015

Towards Interactive Analysis and Exploration of the HPC Performance Landscape

• Salishan conference, Salishan Oregon, 2015

A User Interface for Rural Home Health Medication Reconciliation

• Enterprise Health Management, US Department of Veterans Affairs, 2014

The CommonGround Visual Paradigm for Biosurveillance

- Pacific Northwest National Lab (PNNL), 2013
- Workshop on Signature Discovery, Intelligence and Security Information, Seattle, 2013

Loosely Coordinated Multiple Views

• Lawrence Livermore National Lab, CA, 2012

Infectious Disease Weather Map

- VA Medical Center, Salt Lake City, UT, 2012
- Kaiserslautern University, Kaiserslautern, Germany, 2011
- American Medical Information Association (AMIA), DC, 2011
- Dagstuhl Information Visualization Seminar, Dagstuhl, Germany, 2010

Epinome: A Novel Workbench for Epidemic Investigation

• American Medical Information Association (AMIA), DC, 2010

Visual Analytics in Surveillance and Epidemiology: Challenges and Opportunities,

• CDC, Office of Surveillance, Epidemiology, and Laboratory Services (OSELS), Webinar, 2010

Visual Correlation for Situational Awareness

- Kaiserslautern University, Kaiserslautern, Germany, 2010
- Regional Business Intelligence User Group, Utah, 2010
- Institute for Computational Engineering and Sciences, University of Texas at Austin, 2009
- IBM Haifa Research Lab, Haifa, Israel, 2007
- Google Inc, Tel-Aviv, Israel, 2007
- IEEE Visualization Conference, 2005

Visual Correlation of Public Health Data: Paper, PCs and the Grid

• Tutorial in HealthGrid Conference, 2008

A Visualization Paradigm for Network Intrusion Detection,

• 6th IEEE System, Man and Cybernetics Information Assurance Workshop, 2005

Interactive Point Based Isosurface Extraction,

• IEEE Visualization Conference, 2004

Medical Visualization with ITK

• IEEE Visualization Conference, 2003

Rapid Isosurface Extraction methods

• Tel Aviv University, Israel, 1999

View Dependent Isosurface Extraction

• IEEE Visualization Conference, 1998

PATENTS

1. J. Agutter, S. Foresti, S. Moon, J. Bermudez, Y. Livnat, T. Morahau. "Systems and methods for displaying and querying heterogeneous sets of data", Patent number US7593013, 2009

PRIVATE ENTERPRISE

2. *Bavel*, A commercial Optical Character Recognition (OCR) for complex pages in Hebrew, 1990

GRANTS – On Going

- DOE, Nuclear Energy University Program (NEUP), Oct 2016 Sept 2020 Budget: \$800K PI: Livnat CYCLUSJS: a distributed web-based fuel cycle visual analytics system Develop a web-based scalable visual analytics solution to support advanced computational and analysis of fuel cycles simulations Role: PI
- 2. DOE LLNL B628391 April 2018 April 2019
 Budget: \$95,193 PI: Pascucci
 Silent Error Propagation
 Provide a visualization of the propagation of errors through application and system software in order to identify for application developers the vulnerability of their data structures and code regions to different types of errors, and the way these errors propagate through application state and logic.
 Role: Senior Investigator
- VA Health Services Research and Development, Oct 2015 Sept 2019 Develop novel visual analytics displays to provide cognitive support and population-analytic to aid investigations of infectious disease outbreaks. Role: PI

GRANTS – Completed

- UTAH DIA, June 2016 Dec 2018 Budget: \$2M PI: Raeymakers Role: Co-Investigator
- VA Health Services Research and Development July 2013 June 2017 Budget: \$900K
 PI: Matthew Samore
 Role: Senior Investigator
 Title: CREATE Veterans Like Mine Cognitive Support for Therapeutic Decision Making
- DOE, Idaho National Lab, Feb 2015 April 2017 Budget: \$50K PI: Yarden Livnat Title: Cyclus Visualization
- 4. NSF, SBIR Phase II Sept 2014-Aug 2016 Budget: \$750K (Utah: \$350K)
 PI: Nicole Davis, Yarden Livnat (Co-PI, UofU PI) Title: Create a Machine Learning-based system to Educate and Support Entrepreneurs
- DOD, Telemedicine and Advanced Technology Research Center Mar 2013-Sept 2015 Budget: \$460K PI: Yarden Livnat Title: Innovative Visualization of Infectious Disease Epidemiologic Data
- 6. Virginia Polytechnic Institute & State University MIDAS Aug 2011 Jul 2016 Budget: \$128K
 PI: Adi Gundlapalli and Matthew Samore Role: Co-Investigator
 Title: Modeling Disease Dynamics on Large, Detailed, Co-Evolving Networks
- DOE, Nuclear Energy University Program (NEUP) Oct 2011 Sept 2014 Budget: \$1.2M PI: Paul Wilson Role: Co-PI Title: Developing the user experience for a next generation nuclear fuel cycle simulator
- 8. NSF, SBIR Jan 2014-June 2014 Budget: \$150K (Utah: \$50K)
 PI: Nicole Davis, Yarden Livnat (Co-PI, UofU PI) Title: Create a Machine Learning-based system to Educate and Support Entrepreneurs
- 9. NSF, SBIR Jul 2013-Dec 2013 Budget: \$150K (Utah: \$50K)
 PI: Nicole Davis, Yarden Livnat (Co-PI, UofU PI) Title: Create IPEnclave, a Machine Intelligence-based system for Innovative Organizations to Assess, Manage and License Intellectual Property

- 10. DOE Pacific Northwest National Lab Jan 2013-Sept 2013 Budget: \$65K
 PI: Yarden Livnat Title: Data Analysis through Hadoop and Visual Analytics Software for BEND Scientists
- 11. VA Health Services Research and Development Oct 2008 Sept 2013 Budget: \$3.6M
 PI: Jonathan Nebeker
 Role: Senior Investigator
 Title: Veterans' Informatics, Information, and Computing Infrastructure (VINCI)
- 12. DHHS Agency for Healthcare Research and Quality Aug 2011 July 2013 Budget: \$796K
 PI: Per Gesteland
 Role: Co-Investigator
 Title: Using Health Information Technology to Support Population-Based Clinical Practice
- 13. Utah Department of Health Jan 2013-Aug 2013 Budget: \$25K
 PI: Yarden Livnat Title: U of U Epinome
- 14. VA Salt Lake City Health Care System, Sept 2011- Aug 2012 Budget: \$1.1M
 PI: Stephane Meystre
 Role: Co-PI, PI of CLIN- 04
 Title: Syndrome Surveillance Tools
- 15. University of Utah, SVP Technology Ventures, 2010- 2012 Budget: \$100K per year
 PI: Greg Jones
 Role: Co-PI
 Title: Western Innovation Network (WIN)
- 16. NIH, Sept 2010 Aug 2011 Budget: \$245K PI: Orly Alter Role: Co-PI Title: A Visual Correlation Tool for Large-Scale Molecular Biological Data
- 17. CDC, Aug 2006 July 2009 Budget: \$4.9M
 PI: Matthew Samore, MD
 Role: Senior Investigator
 Title: Centers of Excellence in Public Health Informatics
- 18. DOD, Telemedicine and Advanced Technology Research Center (TATRC), Sept 2007 May 2009
 Budget: \$300K
 PI: Adi Gundlapalli
 Role: Co-PI

Title: Innovative Visualization of Infectious Disease Epidemiologic Data

- 19. United States Air Force AFMC, Sept 2003 Jan 2007 Budget: \$1.6M PI: Stefano Foresti Role: Senior Investigator Title: Intuitive Visual Representation of Network Events to Improve Decision
- 20. NSF, 2002-2004
 Budget: \$32K
 PI: Chris R. Johnson
 Role: Co-PI
 Title: Scientific Portals: Remote Visualization
- 21. NLM, 2003
 Budget: \$100K
 PI: Yarden Livnat
 Title: Software integration on the Insight Toolkit and the SCIRun Problem Solving Environment

TEACHING

- Computational Geometry, Graduate level, University of Utah, 2001
- Introduction to Programming in Java, Undergraduate level, University of Utah, 2001
- Computer Graphics, (Co-Taught), Undergraduate level, Hebrew University, Israel, 1991

STUDENTS

Past

- Geoff Draper, Ph.D. School of Computing, University of Utah
- Roosan Isalm, Ph.D. candidate, Bioinformatics, University of Utah (committee member)
- Robert Flanagan, Ph.D. candidate, Nuclear Engineering, UT Austin (committee member)

PARTICIPANT

- Dagstuhl Information Visualization Seminar, Dagstuhl, Germany, 2010
- Banff, Canada, 2004

GRANT REVIEW PANEL

• NSF Review Panel – CISE Advance Computation Research

REVIEWER

- American Medical Information Association (AMIA)
- Computers and Graphics (CAG)
- Transaction on Visualization and Computer Graphics (TVCG)
- IEEE Visualization
- IEEE InfoVis
- IEEE VizSEC
- IEEE Computer Graphics and Applications
- IEEE Sig. Proc. Mag.
- Symposium on Parallel and Large-Data Visualization and Graphics (PVG)

- Symposium on Computational Geometry
- Vision, Modeling and Visualization (VMV)
- Graphical Models

RECENT COLLABORATIONS

Paul Wilson, University of Wisconsin-Madison, College of Engineering
Erich Schneider, University of Texas at Austin, Department of Mechanical Engineering
Valerio Pascucci, School of Computing, University of Utah
Timo Bremer, Lawrence Livermore National Lab,
Matt Samore, University of Utah, School of Medicine
Per Gesteland, University of Utah, School of Medicine
Adi Gandlapalli, University of Utah, School of Medicine
Jonathan Nebeker, Department of Veteran Affairs, Utah
Michael Rubin, Department of Veteran Affairs, Utah
Wu Xu, Utah Department of Health
Xavier Tricoche, Computer Science Department, Perdue University
Orly Alter, Department of Bioengineering, University of Utah