

Alan Calvitti PhD

data visualization specialist

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Education

- **Nov 2004 - Jun 2007: Postdoctoral Fellow, School of Medicine, University of California San Diego**
 - Medical Informatics researcher, National Library of Medicine funded project.
 - WOC Postdoctoral Researcher, VA San Diego Health Service R&D Unit
- **Aug 2004: PhD, Electrical Engineering and Computer Science, Case Western Reserve University (CWRU), Cleveland OH**
 - Systems and Control program / Dynamics of Adaptive Behavior Group
 - Funded by Office of Naval Research & National Science Foundation fellowships
- **May 1994: BS/MS Systems and Control Engineering, CWRU**
 - Systems Control and Industrial Engineering department
- **Graduate GPA: 3.67 / 4.0**

Programming and Mathematical Skillset

- **Mathematica** 10+ years, expert programmer, www.wolfram.com.
- **C/C++** 5 years experience ad-hoc programming during doctoral research and concurrent programmer/analyst contract positions.

Positions Held

- **Jul 2007: Founded: statigrafix.com**
 - Statigrafix is my startup venture statistical consultancy specializing in rapid-prototype data visualization, exploratory data analysis and computational statistics.
- **Nov 2004 – Jun 2007: Postdoctoral Fellow, School of Medicine, University California San Diego. (and WOC Postdoctoral Researcher, VA San Diego Health Service R&D unit)**
 - National Library of Medicine funded interdisciplinary project (wiisard.org). Developed algorithms and code for data visualization for healthcare process improvement.
- **1994-2004: Research Assistant & Research Fellow, Dynamics of Adaptive Behavior Group, EECS dept. Case Western Reserve University, Cleveland, OH.**
 - Conducted novel Computational, dynamic simulation and bifurcation analysis of phase-locking dynamics and bifurcations in coupled oscillators defined as timed automata.

- **2002-2003: Adjunct Faculty; Professional Academic Tutor. Penn State University.**
- Taught introduction to algorithms; tutored groups and individuals in math, physics.
- **1999: Adjunct Faculty. Cleveland State University**
- Taught undergraduate math
- **1994-1996: Programmer/Analyst (contract). F.P. Bolton School of Nursing / Benjamin Rose Institute, Cleveland, OH.**
- Designed and developed (C++) software to parse & analyze log data from an experimental clinical intranet; helped formulate usage models.
- **1996: Programmer/Analyst (contract). University Hospitals of Cleveland / Bolton School of Nursing, Cleveland, OH.**
- Implemented a handheld-computer database interface for pilot electronic patient record project; helped develop usage model.
- **1991-1994: Teaching Assistant. Case Western Reserve University, Cleveland, Ohio.**
- TA'd undergraduate robotics course.
- Designed and taught summer course for underprivileged high-school students.

Pro Bono Work

- **Jul 2007 – Various Projects . Pro bono data visualization development.** collaborations with researchers at VA San Diego Healthcare System and UCSD School of Medicine and California Institute for Telecommunication and Information Technology to create a market for Statigrafix.

Publications

URLS to select publications, research bibliography and informal material is available at:
statigrafix.com/qualifications/calivitti.publications

- Calvitti A, Hoot N. Visualizing temporal patterns of demand, throughput and crowding in an emergency department. Poster. American Medical Informatics Association National Symposium, Nov 2007, Chicago, IL.
- Calvitti A. Analysis of a distributed model of leg coordination, II: multiple mechanisms with feedback. (Summary of some results in PhD thesis. In preparation, to be submitted to *Biological Cybernetics*, estimated 2008).
- Calvitti A, Brown SW, Lenert LA. Temporal knowledge discovery for clinical process improvement. Poster. *Veterans Administration Health Services R&D 2007 National Meeting*, Arlington VA, Feb 2007.
- Calvitti A, Brown SW, Lenert LA. Visualization of roaming client/server connection patterns during a wirelessly enabled disaster response drill. Poster. *Am. Medical Informatics Assoc. 2006 National Symposium*, Washington DC, Nov 2006.

- Calvitti A. *Phase Locking in Coupled Oscillators as Hybrid Automata*, PhD thesis, Case Western Reserve University, Electrical Engineering and Computer Science Dept, 2004.
 - Calvitti A, Beer RD. Analysis of a distributed model of leg coordination, I: individual mechanisms. *Biological Cybernetics*, 82:197-206, 2000.
 - Brennan PF, Overholt JL, Casper G, Calvitti A. elders using a community network: profile of a champion. *Medinfo* 8(2):1545, 1995.
 - Casper GR, Calvitti A, Brennan PF, Overholt JL. ComputerLink: the impact of a computer network on Alzheimer's caregivers' decision-making confidence and skill. *Medinfo* 8(2):1546, 1995.
 - Calvitti A. Global stabilization of the cart-pole system with dynamical neural networks. MS Thesis, Case Western Reserve University, Systems and Control Engineering Dept, 1994.
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Presentations

- Poster presentation, VA HSR&D National Meeting, Arlington VA, 2/2007 (see above).
 - Poster presentation, AMIA National Symposium, Washington DC, 11/2006 (see above).
 - *Analysis of a model of locomotion coordination*. Biomedical Engineering Society 1998 Fall Meeting, Cleveland, OH, 10/1998. (abstract in: *Annals of Biomedical Engineering*, Vol. 26, Supp. 1, p. S-92).
 - Workshop: *Animal Locomotion and Robotics in the Emerging Applications of Dynamical Systems Program*, Institute for Mathematics and its Applications, University of Minnesota, Minneapolis, MN, 6/1998.
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Professional Awards

- Aug 2007. National Institute of Health (NIH) Loan Repayment Program (LRP) Award for my application, "Temporal Knowledge Discovery and Data Visualization for Healthcare Process Improvement"
 - Due to the termination of my affiliation with a nonprofit institution, NIH-LRP award was rescinded as per contractual terms.
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Professional Affiliations

- Member, American Statistical Association, San Diego chapter.
- Member, Association for Computing Machinery, Special Interest Group: Knowledge Discovery and Data Mining.