

## john murray PH.D.

2120 avy avenue, #7171  
menlo park, CA 94026, USA

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accomplished business unit leader and well-established multi-disciplinary data analytics researcher and technology educator in complex dynamic, collaborative, human-machine systems environments. extensive experience forming and running innovative R&D initiatives, and initiating and managing multi-institution projects, in international commercial and educational settings.

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### educational achievements

- **university of michigan. college of engineering, M.S. 1994, PH.D. 1996.**  
industrial and operations engineering, cognitive ergonomics, human performance analytics, geographic information systems, autonomous transportation systems modeling and simulation
  - **stanford u. mechanical eng. design division (d-school), M.S. 1988.**  
design education and philosophy, robotics and artificial intelligence, smart product design, human factors engineering, probabilistic risk analysis
  - **new york university. graduate school of education, 1984.**  
media ecology program; culture, technology and communications, principles of computer science, interactive media studies
  - **dublin institute of technology, ireland. electrical eng. B.Sc. 1975.**  
control systems, electronics, electromagnetics, digital systems design, software development, telecommunications engineering
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### professional business activities

#### **calidris partners, portola valley CA, jan 2010 – present** **general partner**

- early-stage startup team mentoring. seed funding investments. business plan development and evaluation. IP portfolio assessment and protection policy. human subject data management planning. SBIR proposal design and coordination.

#### **SRI international, menlo park CA, feb 2005 – may 2018** **research program director, computer science laboratory**

- developed winning proposals for \$150m+ leadership bids on contract R&D services, integrating speech analysis, artificial intelligence, educational technology, human cognition models, and data mining.
- principal investigator on innovative human-machine analytics research on global virtual worlds and crowd-sourcing technical tasks using computer games. coordination of international human-subject experiments across multiple countries and integration of multi-disciplinary data analysis tasks.
- multi-disciplinary research supervisor, computational modeling approaches to human cognition, neuroscience, and memory enhancement, in support of cybersecurity, decision support systems, and educational assessment analytics.
- validity and effectiveness research on formative assessments embedded within educational digital video games, using analyses of learner behavior telemetry.
- initiated new research programs on international studies of inter-cultural human behavior and exploring neurocognitive and physiological identifiers of trust.
- member, institutional review board (IRB), overseeing human subject research ethics.

**pemstar pacific consultants, mountain view CA, feb 2000 – jan 2005**  
**vice-president, new system ventures**

- key contributor to company growth from self-financed engineering design startup to successful acquisition by multi-national contract manufacturing corporation.
- initiated international business development initiatives. prepared winning proposals for multi-million dollar R&D contracts in communications, medical equipment, transportation, defense, and corporate security.
- managed pioneering R&D projects for advanced wearable computers, navigation systems and ad hoc wireless networks for government and commercial clients.

**exponent/failure analysis, menlo park CA, aug 1997 – jan 2000**  
**managing research scientist, human performance**

- analyzed lapses in computer security, embedded systems reliability, user interaction failures. expert testimony on fitness for purpose, defective products, etc.
- instituted Y2K consulting practice, using failure modes and effects analyses of intelligent systems, developing proactive error prevention strategies, etc.
- implemented rapid prototyping demonstrations, proof-of-concept engineering, and system usability assessments for mobile data/voice comms systems.
- conducted statistical analyses of vehicle transportation data, pertaining to human-machine interactions with mobile wireless devices.
- researched causes of human errors in supervisory control of nuclear power plants, to support worker awareness/education, system security training, etc.

**amdahl corporation, sunnyvale CA, sept 1985 – aug 1991**  
**staff design engineer/software architect**

- spearheaded development project to implement intelligent decision support tools in high-performance computer operations, using proprietary knowledge engineering tools.
- designed and integrated suite of RAS analytics tools for online support of secure, distributed networked installations.
- architected and implemented innovative software engineering tools suites for embedded OS and firmware products.

**informatics incorporated, new york NY, oct 1982 – aug 1985**  
**information systems consultant**

- senior designer and operating systems development project leader for fortune-50 computer manufacturer. designed & implemented innovative system diagnostics software package, user class privilege controls, and system access security features.

**international computers ltd, ireland & england, aug 1975 – sept 1982**  
**technical specialist/software designer**

- engineering lead for national introduction of new high-performance computer systems. technical education/training for field service staff. i/o controller microcoding, prototype development/ test/debug.
- system bringup and alpha-test support. field support reliability analysis. development of hardware diagnostics tools, scientific data analysis, and financial management applications.

## academic engagements

### **san jose state university, san jose CA, feb 2012 – present** **visiting scientist/educator, college of science**

- academic consultant on cross-disciplinary research collaborations and international outreach initiatives. assist with campus-wide strategies on digital media studies, with emphasis on the use of games/simulations in learning environments, teaching skills development, educational game jams, and cybersecurity training.
- support research proposal development, grant applications, and philanthropic sponsorship activities.
- member: academic senate WASC university accreditation committee, advisory board - virtual reality laboratory

### **tecnologico de monterrey, mexico, feb 2018 – mar 2018** **global faculty program, queretaro international programs office**

- lectures and seminars on: AI, ethics, and society; strategies for global cyber-research; innovation and entrepreneurship; business communication; navigating uncertainly workshop.

### **faculty of arts, aarhus university, denmark, jul 2016 – oct 2016** **visiting researcher, centre for teaching & digital media**

- joint studies with education technology research colleagues and graduate students on interactive collaborative systems, digital games, and innovative pedagogies
- consult on curriculum development for cyber-education, innovation and entrepreneurship, and citizen science analytics and crowd-sourcing initiatives

### **university of michigan, ann arbor MI, sept 1991 – jun 1997** **engineering researcher/adjunct assistant professor**

- undertook human subject cognitive modeling experiments to study data visualizations, using verbal protocol coding & analysis, and statistical data models.
- designed innovative models of distributed systems operations, using knowledge-sharing nodes, intelligent agents, and human-machine interaction paradigms.
- developed proof-of-concept intelligent decision-aiding expert system handling multi-modal real-time data for transit management organization. designed client mobility management system for partnership of human service agencies.
- tethered spacecraft project management. coordinated user-interactive UNIX software development, real-time analytics and scheduling, and dynamic real-time experiment replanning for shuttle science operations center at NASA JSC.
- taught undergraduate & graduate courses in introductory user interactive systems, cognitive ergonomics analyses, and HCI in a team teaching environment.

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## miscellaneous

- co-leader of SRI technology & human consciousness 2017 summer workshop series, an eight-week multi-disciplinary program hosting over fifty neuro-scientists, philosophers, human development theorists, and other thought leaders.
- member, US ACM technical council, focusing on national and international policy issues in ethics, privacy, and security.
- fellow, institution of engineering and technology (UK).
- US and EU citizenship. professional, academic, and personal references available.

## **us patents**

- 6,909,706: multicast wireless ad hoc packet routing
- 6,914,894: role-based IP multicast addressing in a wireless LAN
- 8,928,582: method for adaptive interaction with a legacy software application

## **stanford university, d-school, mechanical engineering design division**

graduate student design team mentor/adviser – ME310, global design entrepreneurship