HUBERT A. BAHR

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OBJECTIVE

Professional Position in Academia in Computer Engineering/Science. Prefer research/teaching oriented assignments. Desired start date January 2005. Primary research areas are embedded systems, advanced computer architecture, and realtime software.

EXPERIENCE

University of North Texas Denton Texas
Lecturer Aug 2003 – May 2004

Prepare and teach courses in engineering technology. This was a half-time one academic year position. Taught basic and advanced courses and lab in electronic communications technology.

University of Central Florida Orlando Florida
Visiting Lecturer Aug 2001 - May 2003

Prepare and teach courses in Computer engineering, such as EEL3342 Digital Electronics and EEL4882, Engineering Systems Software. EEL 4882 was popular course requiring multiple sections each semester. This also including preparing, and recommending software and hardware for the labs to support these courses. Lab was based on distributed severs using virtual LINUX machines allowing each student to have his own virtual machine on a high performance private network with access to Internet.

University of Texas (Austin) Orlando Florida
Research Program Manager Dec 1999 - Aug 2001

Detailed to position at Hq Simulation Training and Instrumentation Command (STRICOM) as a Principle Investigator/ATD Manager. Took research concepts and developed the vision of how they would be applied in the future. Advocated this long term vision to U.S. Army leadership as a primary future training strategy. Developed the Advanced Technology Demonstration Management Plan and justified a new funding program element for the organization to be included in the Department of the Army budget process for Congressional funding. This effort required briefing multiple army leaders/general officers to include the Deputy Chief of Staff for Operations; and both the Military and Civilian Deputy Assistant Secretary of the Army for Acquisition, Logistics, and Technology.

Hq STRICOM (US Army) *Orlando Florida*
Principle Investigator (Embedded Simulation Research) *Jun 1990 - Dec 1999*

Progressed from Lead Software Engineer through Systems Engineer to Principle Investigator. Defined, developed and managed a Multi-year research Project team in Embedded Simulation Technology for Army Ground Combat Vehicles. Published, and presented Multiple Conference, Workshop and Magazine Papers. Briefed high-level Army personnel. Received Engineering team of the Quarter honors. Addressed key technical challenges in the fields of Artificial Intelligence, Pattern Recognition, Computer Network Architecture, and Distributed Processing Developed specifications, and procured, a 2000 Vehicle Data Collection System.

University of Central Florida Orlando Florida
Adjunct Lecturer Aug 1996 - Dec 1996

Prepared and taught EEL 5708 High Performance Computer Architecture course, to 40 in classroom and 10 remote students (Video taped lectures).

Hq TEXCOM (US Army) Fort Hood, Texas
Electronic Engineer Feb 1978 - May 1990

Progressed from Digital Engineer through Supervisory Engineer. Served in Software Engineering/management roles and Deputy Program Management duties on $50,000,000 ($50M) Automated Field Instrumentation System.

Hq SCA (US Airforce) Oklahoma City Air Force Station, Oklahoma
Electronic Engineer June 1975 - Jan 1978

Progressed from vocoder installation engineer to Lead Digital Communications Tech Control Engineer.

Lectek Labs, Inc. Norman, Oklahoma
President Jan 1973 - May 1975

Served as CEO and Chief Engineer for a small (10 Employees) Engineering development lab. Developed custom designs for Oil field instrumentation and businesses in central Oklahoma in areas varying from analog instrumentation (bio-feedback) to early uses of microprocessors.

University of Oklahoma Norman, Oklahoma
Course Development Specialist - Digital Elect. May 1973 - Oct 1973

Developed Course material for 160 classroom/lab hour course in Digital Electronics. Taught course five times. Equivalent to lower division college course.

EDUCATION

University of Central Florida Orlando, Florida
PhD. Computer Engineering Fall 2004

Dissertation Title and Minors: -- Realtime Software Engineering --
Title: Data Bandwidth Reduction Techniques for Distributed Embedded Simulation using Concurrent Behavior Models.
Parallel Computation, Adaptive Control Systems, Artificial Intelligence, Parallel/Distributed Systems, embedded systems

University of Central Florida Orlando Florida
MsCpE: Computer Engineering Jan 91- Dec 94

Thesis Title and Minors -- High Performance Computer Architecture --
Title: Distribution Adaptive Priority Queue Algorithm for Discrete Event Simulation
Software Engr , Parallel Computation.

Honor Societies:

Phi Kappa Phi Eta Kappa Nu

University of Oklahoma Norman, Oklahoma
BSE, Major Systems Engineering Jan 69 - Aug 72

MILITARY EXPERIENCE

Retired from US Army for Physical Disability in 1968 after 6 years of Service. Served as Heavy Weapons Expert in 5th Special Forces, RVN when wounded in Action. Received Purple Heart and Silver Star for gallantry in Action.

PROFESSIONAL RECOGNITION

Received PE from Oklahoma in 1977.
Acquisition Corps Certified as Level III in Systems Engineering.
Multiple letters of Commendation and Achievement.

Funded Research

For the period of October 1996 - July 2001 obtained and annually re-justified a research budget of $2.5 Million dollars each year. Including developing the vision for the research and guiding multiple activities to success. Included obtaining additional funding of $1.5 Million for each of last 2 Years. Successfully proposed and obtaining backing($14.7 M) for advanced development by making multiple presentations (20) to members of Army leadership over 18 month period.

PUBLICATIONS

1. Bahr, H.A., and DeMara, R.F., Data Bandwidth Reduction for Embedded Simulation using Concurrent Behavior Models, *Simulation: Transactions of The Society for Modeling and Simulation International,* Submitted January 2005.
2. Bahr, H.A., and DeMara, R.F., OTBSAF Scalability on Pentium III/4 and Athlon 64/XP3000 Architectures, *The MSIAC's M&S Journal Online,* submitted for Winter 2004.
3. Bahr, H.A., and DeMara, R.F., Smart Priority Queue Algorithms for Self-Optimizing Event Storage, *Journal of Simulation Practice and Theory*. April 2004.
4. Bahr, H. and Holifield, G., "Embedded Simulation: INVEST-STO and Beyond" *proceedings of 1st Swedish American Modeling and Simulation Workshop* SAWMAS, Orlando, Florida. October 2002.
5. McDonald, L. B., Bahr, H.A., and Abate, C., Cost Effectiveness of Embedded Training On Army Ground Vehicles. *22nd Inter-service/Industry Training, Simulation and Education Conference (I/ITSEC) Proceedings*, Orlando, Florida, November 2000, Nominated best paper.
6. Gelenbe, E., Hussain, K., Foss, B., Lobo, N., and Bahr, H.,b Simulation Driven Virtual Objects in Real Scenes, *22nd I/ITSEC Conference Proceedings*, Orlando, Florida, November 2000.
7. Pollak,E., Riley, M,. Falash, M., Bahr, H., Use of Legacy Training Systems in the Development of Embedded Simulation, *Proc of International Training and Education Conference*, The Hague Netherlands 1999.
8. Bahr, H., and Abate, C., Enabling Technologies for Embedded Simulation & Embedded Training, *20th I/ITSEC Conference Proceedings*, Orlando, Florida, December 1998.
9. McDonald, L. B., and Bahr, H.A., Research on the Cost Effectiveness of Embedded Simulation and Embedded Training An Update, *SISO,Simulation Interoperability Workshop*, Orlando, Florida, Fall 1998.
10. Watson, J. and Bahr, H., Ultra Wide Band (UWB) Impulse Radar Imaging For Inter-Vehicle Embedded Simulation (INVEST), *SISO,Simulation Interoperability Workshop*, Orlando, Florida, Fall 1998.
11. Abate,C., Bahr, H. and Brabbs,J., Embedded Simulation for the Army After Next, *Armor*, July-August 1998.
12. McDonald, L. B., and Bahr, H.A., Research on Cost Effectiveness of Embedded Simulation and embedded Training, *SISO: Simulation Interoperability Workshop*, Orlando, Florida, Spring 1998.
13. Bahr, H., Abate C. and Collins J., Embedded Simulation for Army Ground Combat Vehicles, *19th I/ITSEC Conference Proceedings*, Orlando, Florida, December 1997.
14. Bahr, H., DeMara, R., and Georgiopoulos, M., Integer-encoded Massively Parallel Processing of Fast-learning Fuzzy ARTMAP Neural Networks, *Proc, SPIE* Vol. 3077,P.678-679, Orlando, April 1997.
15. Bahr, H., Embedded Simulation for Ground Vehicles, Proceedings of *SISO, Simulation Interoperability Workshop*, Orlando, Florida, Spring 1997.
16. Bahr, H.A., and DeMara, R.F., A Concurrent Model Approach to Reduced Communication in Distributed Simulation, *Proceedings of the 15th Annual Workshop on Distributed Interactive Simulation*, Orlando, Fl., September 1996.
17. Bahr, H., Combined Event and Process Simulation Model of a Distributed Data Collection System. in *Conference Record of the 1994 IEEE Southcon Conference* Orlando, Florida, Pages 326-330.

MOBILITY IMPAIRMENT

I am receiving compensation for permanent disability from the Veterans administration. This disability has existed since 1967. Although limiting my ability to stand and walk, I use a power chair for long distances. It has not prevented me from completing my education and an extensive professional career.

REFERENCES

Dr. Ronald F. DeMara
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