

Keith Stegath

Citizenship : US • Date of birth : 2 April 1957

Contact

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Address

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Profile

Objective I am seeking a challenging position that utilizes my practical experiences, knowledge, and passion for technology.

Availability Feb 15, 2008

Key Skills

Proficient or familiar with a vast array of programming languages, concepts and technologies, including:

C++, C, Lisp, Prolog,
Assembly (ATmega, HC11)

JavaScript

FEA (Ansys, Abacus),
FEM (Applicon), ADAMS

MatLab, Mathematica,
Excel

MSDOS, Windows

Linux, UNIX, QNX

Analog and digital circuits

Hardware & PCB design,
ARM9 (Atmel)

Education

M. S. in Mechanical Engineering - *University of Florida, Gainesville, FL* **2007**

Thesis: "Non-isometric Neuromuscular Electrical Stimulation via Non-model Based Nonlinear Control Methods"

Research area: Nonlinear controls; Robot dynamics; Artificial intelligence; Neuromuscular electrical stimulation

B. S. in Electrical Engineering - *University of Florida, Gainesville, FL* **2005**

Areas of Concentration: Robotics; Microprocessors; Digital and analog circuits

A. A. – *Santa Fe Community College, Gainesville, FL* **2002**

Areas of Concentration: Engineering; Mathematics

A. S. – *Ferris State University, Big Rapids, MI* **1978**

Areas of Concentration: Automobile Technology and Repair

Certificate in Performance Machining – *Ferris State University, Big Rapids, MI* **1976**

Areas of Concentration: Performance machining automobile engines

Teaching Experience

University of Florida, Gainesville, FL

Teaching Assistant – to Professor Carl Crane in "Controls Design Lab"; Supervised and graded weekly lab practicum and assignments for three classes. **2006**

Applicon CAD/CAM, Ann Arbor, MI

Instructor – to support staff and clients; Solids Modeling, Finite Element Analysis, Finite Element Modeling, Mechanism Simulation, 3D Wireframe Modeling, ADAMS, Pro-Engineer **1987 – 1993**

Manufacturing Data Systems Inc., Ann Arbor, MI

Instructor – to clients; Computer aided machine tool programming **1980 – 1983**

Work Experience

Stegath Coachcraft, Lansing, MI

Owner – Classic Automobile Restorations

1993 – 2000

- Responsible for all phases of business
- Complete mechanical, electrical, structural, interior, and exterior restoration

Applicon CAD/CAM, Ann Arbor, MI

Senior Software Application Engineer

1987 – 1993

- Technical support for CAD/CAM and CAE software to in-house Application Engineers
- Taught clients and support staff FEA, Solids modeling, Mechanical Simulation

Troy Design, Troy MI

CAD/CAM Coordinator

1986 – 1987

- Develop procedure for generating CNC machine tool paths using Applicon Solids Model CAD database

Manufacturing Data Systems Inc., Ann Arbor, MI

Application and Product Engineer

1980 – 1986

- Technical support for clients using computer aided machine tool programming
- Team member for developing PC-based 2D CAD and CAM software

Electro Arc Manufacturing, Ann Arbor, MI

Machinist

1979 – 1980

- Setup and operation of manual lathes, vertical mills, and horizontal mills
- Senior programmer and operator of CNC mill

Jasper Auto Parts and Machine Shop, Cicero, IL

Machinist

1978 – 1979

- Crankshaft grinding, cylinder boring, cylinder head reconditioning, engine disassembly

Publications, Conference Presentations, Workshops, Posters, and Session Chairs

K. Stegath, N. Sharma, C.M. Gregory, and W. E. Dixon, "An Extremum seeking method for non-isometric neuromuscular electrical stimulation," in *IEEE Conference on Systems, Man and Cybernetics*, 2007.

Additional: Session chair

C. M. Gregory, S. Bickel, **K. Stegath**, and W. E. Dixon, "The impact of varying stimulation intensity and contraction type on the force-frequency relationship in human skeletal muscle during NMES," *American Physical Therapy Association, Combined Sections Meeting*, accepted, to appear, 2008.

Additional: Poster

K. Stegath, N. Sharma, C.M. Gregory, and W. E. Dixon, "Nonlinear tracking control of a human limb via neuromuscular electrical stimulation," *IEEE Transactions on Neural Systems & Rehabilitation Engineering*, 2007, submitted.

K. Stegath, N. Sharma, C.M. Gregory, and W. E. Dixon, "An Extremum seeking method for non-isometric neuromuscular electrical stimulation," *IEEE Transactions on Neural Systems & Rehabilitation Engineering*, 2007, submitted.

K. Stegath, N. Sharma, C.M. Gregory, and W. E. Dixon, "Experimental Demonstration of RISE-Based NMES of Human Quadriceps Muscle," *IEEE-NIH Life Science Systems & Applications Workshop*, 2007, pp 97 – 100.

Poster

Writing

"Birth of a Warrior", "Secrets"
Short stories

*Novels, Science fiction techno-thriller
Science fiction*

Worked with a published author