

Dr. Joseph T. Foley

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Professional

Mechanical Design, Radio Frequency Identification, Manufacturing Design and Process Control, Computer Automation, Distributed System Design, Network Administration and Security, Database Applications.

Interests

Robotics, Automatic Identification and Information Collection, Wireless Communications, Computer-CAM/Instrument Interfaces, Digital Design, Home Automation.

Education

Bachelor in Computer Science and Electrical Engineering (MIT, June 1999)

"Low-cost Automated Pine-Car Derby System"

Master of Engineering in Computer Science and Electrical Engineering (MIT, June 1999)

"An Infrastructure for Electromechanical Appliances on the Internet" US Patent 7,765,253

MIT Doctorate of Philosophy in Mechanical Engineering (MIT, February 2007)

"Security Approaches for Radio Frequency Identification Systems"

Experience

Consultant

September 2010 – Current

Foley Consulting

Salem, NH USA & Reykjavik, Iceland

Finite Element Analysis of advanced structural composites used to develop a high speed quadraped robot in Professor Sangbae Kim's Bioinspired Robotics Laboratory.

Senior Research Scientist, Government & Industrial

Research Division

November 2007 – August 2010

iRobot Corporation

Bedford, MA

Creating and implementing mechanical designs for robot platforms. Tech lead for DARPA DSO ChemBots project. Software developer on DARPA NOSTRA project.

Consultant

February 2000 – June 2001

Insight Technologies

Londonderry, NH

Consulted on manufacturing M3/M5 Tactical Illuminator as part of graduate manufacturing coursework (2.810). Focus was on increasing part quality and throughput using Japanese manufacturing techniques.

Lead Mechanical Designer

July 1998 – September 1998

Brute Force Games

Cambridge, MA

Designed full immersion game simulator mechanical platform leveraging MIT Aero-Astro vection research.

Network and Computer Administrator

March 1994 - August 1995

Brooks Automation

Lowell, MA

Network Installation: Analysis, Design, Upgrading/Installing.

Computer Equipment Service: Software and Hardware Repair/Administration/Migration.

Skills

Project Management: 8D, Total Project Control, Toyoda Manufacturing Methods

Computer languages: C(++), Perl, Python, PHP, Java, XML, lexx, SQL, PICASM

UN_X/Media development tools: HTML/CGI, L^AT_EX, PostScript, sh, CVS/Subversion, Kerberos

Mech E Tools: Matlab, Maple, ProEngineer, Windchill, SolidWorks, Rapid Prototyping, CNC Machining

Digital System Design: Logic Analyzer, Serial Protocol Analyzer, Controller Simulators