Jeremy J. Schembri

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Profile

An experienced, highly effective and enthusiastic Master of Mechanical Engineering graduate with a thesis on Computational Fluid Dynamics. Designed, drafted and troubleshot a variety of mechanical and aviation systems. A detail oriented, energetic problem solver with excellent analytical strengths. Well-developed team building and leadership strengths with training and mentoring skills to motivate teams. Takes ownership and accountability through accomplished verbal and written skills. Have successfully functioned in a supervisory capacity, an individual contributor and in a team environment. Developed and simulated energy efficient homes for an Ottawa housing company and for an international competition.

Summary of Qualifications

- Accomplished engineering and computer software skills
    - MATLAB/Simulink, C++, C, Linux, makefiles, Fortran, Maple, Python, VBA, Office
    - CFD with in-house code, CFX and Fluent
    - Finite Element Analysis and Mesh generation with ANSYS
    - 3D modelling in Pro/Engineering, Inventor, Solidworks and CATIA
    - Engineering/fabrication drawings and Piping and Instrumentation Diagrams (P&IDs) with AutoCAD and AutoDesk's Inventor
    - Working knowledge regulations: ASME, CAR, FAA, CSA
- Prepared design proposals, reports and presentations
- Languages: Fluent in English & French
- P.Eng.: Eligible
- Citizenship: Canadian, Italian

Education

Master of Mechanical Engineering (Thesis) – Computational Fluid Dynamics, McGill University, 2012 - April 2015

Mechanical/Aerospace Engineering - (Co-op) Aerodynamics, Propulsion, & Vehicle Performance, Minor in Business, Carleton University, 2006 - 2011

Publications

J. Schembri and S. Nadarajah, "Modelling laminar-to-turbulent transition on three dimensional wings", Proc. The 62nd CASI Aeronautics Conference, Montreal, Quebec, May 2015

Y. Zhou, J. Schembri, L. Lamont and J. Bird, "Experiments and analysis of stand-alone GPS for relative location discovery for SASNet," DRDC Technical Memorandum, in press, 2010.

Y. Zhou, J. Schembri, L. Lamont and J. Bird, "Analysis of Stand-Alone GPS for Relative Location Discovery in Wireless Sensor Networks", Proc. The 22th Canadian Conference on Electrical and Computer Engineering, St. John's, Newfoundland and Labrador, Canada, May 2009

Work Experience

McGill University – M.Eng Thesis on 3D Fluid Transition   September 2012 to April 2015
- Implemented, coded and tested a three dimensional Reynolds-averaged Navier-Stokes transition model
- Generated 2D/3D grids, ran optimization test cases, performed grid sensitivity studies, applied fluid dynamics principles and created test cases to comparing against experimental data
- Investigated the laminar-to-turbulent transition along an airfoil and wing while tuning the numerical model to fit a wide range of experimental data
- Collaborated with members of aircraft industry (Bombardier) to verify their optimization and CFD framework

Ross Video - Mechanical Designer   June 2011 to September 2012
- Designed, prototyped, tested and implemented all mechanical features on a new rack mounted multi-definition router for live video production for companies like ABC, CNN, BBC and CBC
- Worked with machine/sheet metal shops to design for manufacturability, manage risk and reduce costs
- Conducted and interpreted test scenarios for measuring electromagnetic interference and thermal loads
- Effectively worked on multi-disciplinary teams to ensure compliance with regulatory codes

MDS Aero Support Corporation - Mechanical Designer   Summer 2009 to Fall 2010
- Contributed to the conceptual and detailed design of mechanical systems, facility planning and equipment layout of multiple aviation, industrial and marine engine test facilities
- Drafted engineering drawings for a wide variety of mechanical parts and assemblies with an emphasis on welding, machining and geometric tolerances
- Wrote operational manuals and acceptance test procedures for mechanical systems and drafted Piping Instrumentation Diagrams
- Created computer simulations, verified with engineering calculations to determine stress, deformation and maximum loads for normal operation and engine failure

Communication Research Centre - Engineering Research Assistant   Summer 2008
- Co-developed a revolutionary sensor surveillance network with the Canadian military
- Developed innovative and non-conventional methods to monitor and track enemy combatants

Bell Canada Enterprise –Verification Specialist   Summer 2007
- Comprehensively tested and verified a new IP Voicemail platform

Extra-Curricular Activities

- Teaching Assistant during the 2014 Fall Semester at McGill
- Carleton and McGill University Debating Society, VP Finance, competed and judged in Ontario and U.S.
- Member of the Carleton University's team participating in NASA's Great Moonbuggy Challenge
- Designed wearable technology and music instruments; presented in Montreal and Toronto
- Volunteer: Ottawa Bluesfest 2008-2014 and 2013 Homework Zone
- Flight training for Private Pilot's License
- Extensive travelling throughout Canada, United States, Europe, Japan and South America
- Accomplished electric and acoustic guitarist, licensed Ottawa and Montreal Busker
- Wrote newspaper articles for McGill (http://www.mcgilldaily.com/author/jeremy-schembri/)
- Competed in Taekwon-Do at the international level in Seoul, South Korea in 2004-2007
- Avid alpine skier and competed in several triathlons