
JONAS GUSTAVSSON

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OBJECTIVE

To obtain a position as Senior Research Engineer working with thermal/fluids development or testing.

EXPERIENCE

- **Assistant/Associate Research Scientist** at Florida Center for Advanced Aero-Propulsion, July 2009-present. Carrying out and supervising experiments relating to noise suppression and flow control for advanced propulsion systems. Acoustic measurements on supersonic jets in anechoic chamber. Spray droplet characterization using **LDV** and **PDPA**.
- **Test Engineer** at Siemens Industrial Turbomachinery, Sep 2008-June 2009. Involved in flow and combustion testing of **gas turbine** components. Used **IR thermography** for film cooling effectiveness measurements.
- **Postdoctoral Associate** at the University of Florida, *May 2004-Jul 2008*. Performing **FT-IR** tests in an instrumented, heated test cell to determine the products formed and the time scales involved in the **combustion** of a new breed of fluorinated polymers. Designed and used water tunnel for **cavitation** testing using a new **LIF** approach with a fluorescing refrigerant fluid. Independently developed test hard- and software, performed data acquisition and spectral post-processing delivering results in journal article form. Mentoring and supervising junior lab workers.
- **Lecturer** at the University of Florida, *Jan 2006-May 2006*. Teaching a class of ~150 undergraduates Thermodynamics, giving lectures, supervising 4 teaching assistants etc.
- **Research and Teaching Assistant** at the University of Florida, *Aug 2000-May 2004*. Carrying out research in two fields: testing of a pulse detonation engine inlet in a **supersonic** wind tunnel and evaluation of the accuracy of filtered Rayleigh scattering applied to a supersonic free jet. Measurement tools included Rayleigh scattering (**FRS**) using an Nd:YAG laser, intensified CCD cameras and a molecular vapor cell, as well as conventional techniques such as schlieren optics and pressure transducers. Responsible for the entire project chain, from the design of the experimental setup, interaction with suppliers, integration of components and execution of tests, followed by written reports as well as oral presentations. Teaching responsibilities included tutoring undergraduate Dynamics.
- **Research Engineer** at the Aeronautical Research Institute of Sweden, *Feb 1999-Aug 2000*. Working on several different wind-tunnel tests related to **wind-power** turbines, e. g. PIV measurements on a high- α airfoil, development of a new, more reliable, cup anemometer, smoke visualizations and static pressure measurements.
- **Research and Teaching Assistant** at the Department of Mechanics, Royal Institute of Technology, *1997-98*. Supervised undergraduate students during fluids experiments. Took part in **wind-tunnel** research using **PIV**, **hot-wire** anemometry and **Preston** probes.

EDUCATION

- **Ph.D. in Aerospace Engineering**, Aug 2000-May 2004
University of Florida, Gainesville, FL
Dissertation: *Accuracy investigation of filtered Rayleigh scattering for velocity measurements*
GPA: 3.85
- **M.S. in Engineering Physics**, Sep 1992-Oct 1998
Royal Institute of Technology, Stockholm, Sweden
Master's thesis: *Experiments on turbulent flow separation*
Specialization: Applied Mechanics
- **B.A. in English**, Sep 1992-Oct 1996
Stockholm University, Stockholm, Sweden
Diploma Project: *Text Categorization Using Acquaintance* (C++ code for automatic text analysis)
Courses also included: Law, Business Administration, Chemistry and Biotechnology

ADDITIONAL INFORMATION

Languages: Swedish (native speaker), English (fluent), German (basic), Italian (basic)

Computer skills: LabView, Matlab, MS Office

Technical publications: 9 refereed journal articles, 17 conference papers