Matthew Bronson de Stadler
Mechanical engineer
Computational scientist

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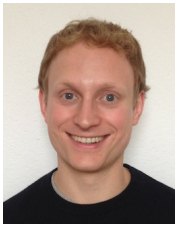

Education

Ph.D. Engineering Sciences (Mechanical Engineering), University of California San Diego 2013
Thesis title: High resolution simulation of the turbulent wake behind a sphere in a stratified fluid

M.S. Engineering Sciences (Mechanical Engineering), University of California San Diego 2009

B.S. Aerospace Engineering, University of Virginia. With highest distinction. 2007

Experience

Kungliga Tekniska Högskolan (Royal Institute of Technology), Stockholm, Sweden 2013-present
Postdoctoral Researcher, Mechanics Department, Professor Dan Henningson
Worked on development of a virtual wind tunnel for high resolution simulation of the flow around a wing at high Reynolds number

University of California San Diego, La Jolla, CA 2007-2013
Graduate Student Researcher, MAE Department, Professor Sutanu Sarkar
Developed numerical software and performed numerical simulations to study the turbulent wake behind a bluff body in a stratified fluid

Gordon Scholar, Jacobs School of Engineering 2010-2013
Participated in engineering leardership development program including courses, workshops, forums and hands-on activities to develop leadership skills

Lawrence Livermore National Laboratory, Livermore, CA Summer 2007
Science and Engineering Technical Scholar, Institute for Scientific Computing Research
Developed a numerical simulation using Onsager's pancake approximation for fluid flow in a gas centrifuge

University of Virginia, Charlottesville, VA 2005-2007
Undergraduate Student Researcher, MAE Department, Professor Hossein Haj-Hariri
Investigated optimal geometries for a heat sink

Naval Research Laboratory, Washington, DC
Engineering Technician, Astrodynamics and Navigation Section,
Performed system integration support for a test of a new communications frequency Summer 2006
Modeled the communications link between a satellite and a ground network Summer 2005

Skills and Competencies

Programs: Fortran, Matlab, Visual Basic, MPI, Linux, Unix, bash, Subversion, grace/XMgrace, Tecplot, Paraview, Latex, HTML, CSS, Microsoft Office (Word, Excel, PowerPoint), OpenOffice

Technical expertise: Fluid mechanics, heat transfer, turbulence, computational fluid dynamics, scientific computing, environmental fluid dynamics, massively parallel computer simulation, proposal writing

Publications and Presentations

4 refereed journal articles and 1 currently under review

3 published conference proceedings

12 conference presentations

4 seminars presented

6 posters presented

Teaching Experience

Mentored new PhD student in my research group, UCSD. June 2011-2013

Teaching assistant, Flow and Transport in the Environment, UCSD. Fall 2011

Teaching assistant, Aerodynamics Laboratory course, UVA. Spring 2007

Outreach

Jacobs Undergraduate Mentorship Program, Mentored a group of 1 senior level undergraduate and 4-6 freshman. 2011-2013

San Diego Science Festival, Spoke with K-12 students about life as a scientist/engineer. 2011-2013

Grants

PRACE preparatory access grant (1.1 million CPU hours) 2014

Awards and Honors

FLOW Postdoctoral Scholarship, KTH 2013-2014

Wally Schirra Memorial Scholarship, Achievement Rewards for College Scientists Foundation 2010-2013

National Defense Science & Engineering Graduate Fellowship, Department of Defense (HPCMO) 2008-2011

Jacobs School Fellowship, UCSD 2007-2010

Sigma Gamma Tau Outstanding Aerospace Engineering Graduate, UVA 2007

Virginia Space Grant Consortium Undergraduate Aerospace Research Scholarship 2006-2007

Languages

English: Native

Swedish: Intermediate (speaking, listening, reading). Beginner (writing)

French: Intermediate (speaking, listening, reading). Beginner (writing)

Personal data

Hobbies: Travel, cooking, reading, theater, art, swimming