Resume **Frans H. Ebersohn** **Aerospace Engineering**

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OBJECTIVE Overview of Experience

EDUCATION

Doctor of Philosophy, Expected Award Date: May 2016
University of Michigan, Ann Arbor, MI
Major: Aerospace Engineering
GPA: N/A

Doctor of Philosophy, Transferred to University of Michigan
University of Texas at Austin
Major: Aerospace Engineering
GPA: 3.918

Master of Science, Award Date: December 2012
Texas A&M University, College Station
Major: Aerospace Engineering
GPA: 3.64

Bachelor of Science, Award Date: May 2010
Texas A&M University, College Station
Major: Aerospace Engineering
Minor: Mathematics
GPA: 3.716

EXPERIENCE

Graduate Student Researcher Fall 2011-Present
NASA, University of Michigan, University of Texas at Austin, and Texas A&M University

- Studying magnetic nozzle effects on plasma plumes as part of NASA Space Technology Research Fellowship
- Developing numerical experiment to study plasma jet expansions under the influence of diverging magnetic fields for space propulsion applications

Team Member Spring 2013
Caltech Space Challenge

- Worked with team on rapid mission design for manned exploration of a Martian moon
- Worked on the propulsion and spacecraft design sub-team and presented our final design to group of academic and industry experts

Graduate Project Advisor Fall 2011-Spring 2012
Aggie Balloon Club, Texas A&M University, and Project Aether

- Advised undergraduate students and participated in expedition to Fairbanks, AK to perform experiments in Aurora Borealis
- Helped develop double Langmuir probe experiment

Teaching Assistant Fall 2010
Department of Aerospace Engineering, Texas A&M University

- Teaching assistant under Dr. S. Girimaji for heat transfer and viscous flows course

Undergraduate Reseacher Summer 2009-Spring 2010
Research Experiences for Undergraduates and Undergraduate Research Fellows Programs, Texas A&M University

- Research in topics related to plasma propulsion at TAMU for Undergraduate thesis under Dr. J. Richard

Senior Design Member Fall 2009-Spring 2010
Department of Aerospace Engineering, Texas A&M University

- Senior design project of hybrid chemical propulsion rocket

Research Assistant Summer 2007
Electroactive Materials Characterization Laboratory, Texas A&M University

- Performed experiments on actuation of carbon nanotube films for Dr. Z. Ounaies and Mr. S. Deshmukh

EMPLOYMENT SKILLS

Computer Skills: C++, Fortran, Linux, TecPlot, Matlab, Maple, Supercomputing/Parallel Computing, MPI, Microsoft Office, LATEX, Adobe Photoshop

Other Skills: Fluent in Afrikaans

AWARDS AND ACCOLADES

NASA Space Technology Research Fellowship, MIPSE Fellowship, Cockrell School of Engineering Fellowship (UT), Office of Graduate Studies Merit Fellowship (TAMU), Undergraduate Research Fellow, Engineering Scholars Program, Aerospace Engineering Honors, Sigma Gamma Tau Student of the Year (TAMU), Magna Cum Laude, McFadden Scholarship(TAMU), Deans List, Physics Mechanics Scholar

PUBLICATIONS

Ebersohn, F.H., Girimaji, S.S., Staack, D., Shebalin, J.V., Longmier, B. and Olsen, C., *Resistive Magnetohydrodynamic Study of Magnetic Field Effects on Plasma Plumes*, 44th AIAA Plasmadynamics and Lasers Conference, (2013)

Ebersohn, F.H., *Gas Kinetic Study of Magnetic Field Effects on Plasma Plumes*, M.Sc. Thesis, Texas A&M University: U.S.A., (2012)

Ebersohn, F.H., Girimaji, S.S., Staack, D., Shebalin, J.V., Longmier, B. and Olsen, C., *Magnetic Nozzle Plasma Plume: Review of Crucial Physical Phenomema*, 48th AIAA JPC, (2012)

Ebersohn, F.H., Girimaji, S.S., Staack, D., Shebalin, J.V., Longmier, B. and Olsen, C., *Towards Computation of Resistive MHD Magnetic Nozzle Plasma Flow*, 48th AIAA JPC, (2012)

Ebersohn, F.H., Shebalin, J.V., Girimaji, S.S., and Staack, D., *Magnetic Field Effects on Plasma Plumes*, EPS/ICPP, (2012)

Ebersohn, F.H., *Modeling plasma flow in a magnetic nozzle with the lattice-Boltzmann method*, B.Sc. Thesis, Texas A&M University: U.S.A., (2010)

COMMUNITY SERVICE	Service activities at South African township Kayamandi and farm school, Summer 2010
	Mentoring freshmen Aerospace Engineering Students with Sigma Gamma Tau, TAMU, Fall 2009 - Spring 2010
	Volunteered at College Hills Elementary with ASV teaching Math Enrichment.
EXTRA-CURRICULAR ACTIVITIES	Sigma Gamma Tau (Former Officer), Tau Beta Pi, AIAA, AGU, APS, Texas A&M Mens Club Soccer(Former Captain), National Society of Collegiate Scholars, Aggie School Volunteers