

D. Scott Eberhardt

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A) Professional Preparation

Massachusetts Institute of Technology, Aeronautics and Astronautics, BS, 1980.
Massachusetts Institute of Technology, Aeronautics and Astronautics, BS, 1981.
Stanford University, Aeronautics and Astronautics, 1985.

B) Appointments

1993 – Current: Associate Professor, Department of Aeronautics and Astronautics, University of Washington, Seattle, WA
1986 – 1993: Assistant Professor, Department of Aeronautics and Astronautics, University of Washington, Seattle, WA
1984-1986: Research Engineer, NASA Ames Research Center, Moffett Field, CA.

C) Select Recent Publications

Most Relevant

1. Eberhardt, S., "Airplanes for Everyone: A General Education Course for Non-Engineers," **Journal of Engineering Education**, Jan. 2000, pp. 17-20.
2. Eberhardt, S., "Developing WEB-based tools for a General-Education course in Aerospace," Paper #477, Proceedings of the 2002 American Society for Engineering Education Annual Conference & Exposition, June, 2002.
3. Eberhardt, S. and Kumar, V., "Long-term impact of the Boeing Welliver Faculty Fellowship Program," Paper 1649, Proceedings of the 2002 American Society for Engineering Education Annual Conference & Exposition, June, 2002.

Other Significant Publications

4. Anderson, D., and Eberhardt, S. "The Newtonian Description of Lift of a Wing," FERMILAB-Pub-01/036-E, March 2001.
5. **Understanding Flight**, with David Anderson, McGraw-Hill, New York, 2001, ISBN 0-07-136377-7.
6. Anderson, D., Eberhardt, S., "How Airplanes Fly: A Physical Description of Lift," **Sport Aviation**, Vol 48, No 2, Feb. 1999, pp. 85-95 and <http://www.aa.washington.edu/faculty/eberhardt/lift.htm>.
Translations:
 - o Japanese:
 - *Aviation Engineering*, 2001 no 11 & 12, 2002 no 1
 - *JSA Information*, No, 250, Aug. 2002.
 - o French: <http://www.aa.washington.edu/faculty/eberhardt/portance.html>
 - o Spanish: <http://www.aa.washington.edu/faculty/eberhardt/AVIONES.PDF>
7. **The Standard Handbook for Aeronautical and Astronautical Engineers**, Mark Davies, ed., Section 7, McGraw Hill, New York, 2003, ISBN 0-07-136229-0.
8. Eberhardt, S., and Imlay, S. I., "A Diagonal Implicit Scheme for Computing Flows with Finite-Rate Chemistry," **Journal of Thermophysics and Heat Transfer**, Vol. 6, No. 2, April-June, 1992, pp. 208-216

D) Synergistic Activities

- a) "Process Ownership of Courses", CELT grant to transition from a "Course Coordinator" model to a "Process Ownership" model. The work resulted in a WEB-based "Faculty Handbook."
- b) Undergraduate Committee Chair/Faculty Advisor, 1998 – current. Led transition to ABET 2000 practices, culminated in outstanding review in autumn 2001. Led department through transition from pure engineering-science curriculum to a hands-on engineering curriculum.
- c) Course Owner and Creator: AA101, Air and Space Vehicles. Created AA101 to expose the rest of campus to the field of Aerospace Engineering. The course attracts underrepresented minorities, some of whom decide to major in AA.
- d) Author. Co-authored popular book, "Understanding Flight", targeting aviation enthusiasts. The focus is to introduce enthusiasts to the physics of flight without complex mathematics. Also, co-authored popular articles for the general public on flight.
- e) AIAA Pacific Northwest Chapter Advisory Council: Elected and re-elected to serve on council. Appointed outreach program lead. Also, a member of ASEE.

E) Collaborators & Other Affiliations

Graduate and Postdoctoral Advisors

M.S. Advisor

Professor Eugene Covert, MIT

Ph.D. Advisor

Professor Don Baganoff, Stanford University

Thesis Advisor and Postgraduate-Scholar Sponsor

M.S. Advisor

Ph.D. Advisor

Current Collaborators

Aeronautical Testing Services

Paul Robertson

Boeing Corporation

John McMasters, Mark Goldhammer

Chungnam National University

Byoungsoo Kim

Korean Aerospace Research Institute

Byeoung-Hee Chang

University of Washington

Uri Shumlak, Walter Christiansen, Uy-Loi Ly,

Dana Dabiri, Adam Bruckner, Vipin Kumar

F) Other Information

In 1994 I was diagnosed with chronic myelogenous leukemia (CML). Treatment required a bone marrow transplant and many years of follow-up chemotherapy. During my rebuilding years I have focused on education and teaching. Most of my recent accomplishments have been in teaching, program development and making aerospace engineering accessible to everyone. This is my first NSF proposal since before my diagnosis. I include this information to explain the absence of technical publications during the years from 1994-2000, which were part of a long, hard recovery.