

Karl J. L. Geisler, Ph.D.

Thermal Energy Engineer

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EXPERIENCE

November 2002 to Present General Dynamics Advanced Information Systems
Lead Hardware Engineer Bloomington, MN

- Energy-efficient nanoprocessor cooling
- Thermal management of power conversion circuitry
- Ruggedization of commercial electronics for extreme outdoor environments
- Thermomechanical design for high-reliability and extended service life applications

Fall 2007 Department of Mechanical Engineering
Lecturer – ME5348 Heat Transfer in Electronic Equipment University of Minnesota

June 2000 – September 2001 Cray Inc., Chippewa Falls, WI
Engineering Intern

Characterization and optimization of heat exchanger and air handling system for X1 supercomputer.

June 1995 to August 2002 Laboratory for the Thermal Management of Electronics
Research Assistant to Prof. Avram Bar-Cohen University of Minnesota

Various experimental and theoretical research projects related to the thermal management of micro- and nanoelectronics, compact heat exchangers, and two-phase cooling systems.

1997 to 2002 Department of Mechanical Engineering, University of Minnesota
Teaching Assistant

Multiple assignments in Thermodynamics and Heat Transfer, undergraduate- and graduate-level

EDUCATION

Ph.D. in Mechanical Engineering, University of Minnesota, Twin Cities Campus, February 2007

M.S. in Mechanical Engineering, University of Minnesota, Twin Cities Campus, August 1997

Cumulative Graduate School GPA: 3.8/4.0

B.A. in Physics, Lawrence University of Appleton, Wisconsin, June 1994, Cum Laude honors

PROFESSIONAL MEMBERSHIPS & VOLUNTEERISM

American Society of Mechanical Engineers, ASME

IEEE Components, Packaging, and Manufacturing Technology Society (CPMT)

Member, 2009 Univ. of Minn. Dept. of Mechanical Engineering Strategic Planning Committee

SKILLS AND TOOLS

Numerous CFD, FEA, and CAD software packages, including Icepak, Fluent, ANSYS Multiphysics, ANSYS Workbench, Pro/Engineer (Wildfire 3.0), and Pro/Mechanica; symbolic and numeric mathematics software packages such as Matlab, Mathematica, MathCAD, IDL, Maple, and Engineering Equation Solver (EES); CALCE Simulation Assisted Reliability Assessment (SARA) software. Programming experience in C, FORTRAN, PASCAL, BASIC, and HTML.

Various scientific instruments, machine tools, measurement techniques, statistical analysis, and design of experiments. Cleanroom experience.

Publications list available upon request or on-line at www.menet.umn.edu/~kgeisler