

Gregory W. Davis, Ph.D., P.E.

Department of Mechanical Engineering
Kettering University
formerly known as
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Education & Credentials

- ♦ Ph. D. in Mechanical Engineering, The University of Michigan, Ann Arbor, 1991
Thesis: "Comprehensive Diagnostic Software for Engine Cycle Analysis"
- ♦ Master of Science in Mechanical Engineering, Oakland University, 1986
- ♦ Bachelor of Science in Mechanical Engineering, The University of Michigan, Ann Arbor, 1982

- ♦ Licensed Professional Engineer in the State of Michigan, License # 35473

Professional Experience

- Fall 1997
to Present* Professor of Mechanical Engineering & Director-Advanced Engine Research Laboratory (AERL), Kettering University. Responsibilities include leading and coordinating automotive engineering curriculum including faculty and graduate research. Teaching graduate and undergraduate mechanical engineering courses along with directing all research and development activities in the AERL. The AERL specializes in development and testing of automotive systems including both laboratory and on-road data acquisition & control. Additional responsibilities include developing and teaching Automotive Engineering laboratories and curriculum. Serve as faculty advisor to the SAE Student Branch and Clean Snowmobile Challenge where we have developed alternative vehicles, including extensive modifications of the Powertrain and Body/Chassis systems, including fuel delivery, and powertrain calibrations and controls. Supervised over 80 graduate and undergraduate theses in engineering.
- Fall 2009
to Present* Developer & Instructor, Continuing Professional Development Programs. Develop & Teach continuing education short courses for industrial clients. Courses include, "Introduction to Heat Transfer with Applications Related to Vehicle Passenger Compartment Cooling," and "Application of Fluid Mechanics to Vehicle Cooling Systems."
- Spring 2003
to Present* Instructor, SAE Continuing Professional Development Programs. Develop, Teach, and co-teach short courses in continuing professional development directed to automotive powertrain systems and controls, braking, handling, chassis, and exterior body systems for SAE at its headquarters and at company locations. Clients include engineers and managers from all major original equipment managers and suppliers, governmental regulatory agencies, and other professionals involved in the automotive industry world-wide.

- Summer 1991
To Present* Engineering Consultant. As a licensed Professional Engineer in the State of Michigan (35473), I am actively engaged in a variety of engineering consultations with both governmental and industrial clients.
- Winter 1995
to Fall 1997* Director, Master of Automotive Engineering Program and Associate Professor, Mechanical Engineering Department, Lawrence Technological University. Coordinated and taught graduate and undergraduate mechanical engineering courses. Master of Automotive Engineering program accomplishments include a complete restructuring of the program, moving from a “lockstep” model to a more traditional prerequisite model to better meet the needs of students. Advisor for 145 graduate and undergraduate project students. Faculty advisor to the FutureCar Program where we developed hybrid electric and alternative vehicles capable of achieving dramatically higher fuel economy and lower emissions. This was accomplished through extensive Powertrain and Body/Chassis system modifications to an existing vehicle. Developed automated mechanical transmission (AMT) system for the hybrid electric powertrain. Also served as Laboratory manager for the Vehicle Dynamics Laboratory.
- Fall 1992
to WI 1995* Lecturer, Whiting School Evening Programs in Engineering & Applied Science, Johns Hopkins University. Taught mechanical engineering courses in the undergraduate program.
- Summer 1991
to WI 1995* Assistant Professor, Mechanical Engineering Department, United States Naval Academy. Coordinated and taught courses in the fluid and thermal sciences areas of mechanical engineering. Past Chairman (1994) of the dept. curriculum development committee. Laboratory manager for the Internal Combustion Engines and Power Systems laboratories. Faculty advisor for the USNA Society of Automotive Engineers (SAE). Project director for the following student projects: 1991-5 Hybrid Electric Vehicle (HEV) Challenge Vehicles, 1996 Formula. The Hybrid Vehicles were developed by extensively modifying the Powertrain and Body/Chassis systems.
- Fall 1986
to Summer
1991* Ph.D. Candidate & Graduate Asst., College of Engrg., U. of Michigan, Ann Arbor. Successfully defended Ph.D. dissertation (July 1991). Thesis: "Comprehensive Diagnostic Software for Engine Cycle Analysis". Minority Engineering Program Office Engineering tutor. Taught courses in Mechanical Engineering and mentored graduate student teaching assistants.
- Winter 1988
to Fall 1988* Engineering Co-Op., Advanced Engineering, AC-Rochester Div., General Motors Corp. Developed IC engine models used to conduct parametric studies of the influence of EGR on emissions, valve timing effects, etc.
- Spring 1987
to 1999* Consulting Engineer & Partner, Intellec Systems, Inc. Developed computer software for industrial clients.

- Summers 1986 to 1987* Summer Intern, Advanced & Plant Engineering, AC-Rochester Div., General Motors Corporation. Developed computer-aided software system for a manufacturing plant. Developed software combustion model to predict flame temperature, pressure, and resultant NOx formation in a SI engine.
- Winter 1985 to Spring 1986* Graduate Research Asst. with Drs. Bhatt and Wedekind, School of Engineering, Oakland University. Developed & utilized computer-aided data acquisition control and analysis software for heating system research.
- Summer 1982 to Winter 1985* Associate Engineer, Production Dept., St. Clair Power Plant Detroit Edison Co. Responsible for operation and maintenance of two 150 MW turbo-generating units. Promoted to Plant Thermal Performance Engineer; duties included performance testing, analyzing results, and conducting monthly plant & area staff meetings.
- Winter 1979 to WI 1980* Engineering Technician, Testing & Evaluation Section, Motor Vehicle Emissions Lab., EPA. Supervised testing, collected & analyzed data, and drove vehicle tests.

Awards and Honors

Patents

- ♦ ENERGY CONSERVATION SYSTEMS AND METHODS, Jeffrey N. Yu, James W. Hill, Gregory W. Davis, U.S. Patent Application 20110125294, Issued May 26, 2011, Notice of Allowance September 25, 2013

Teaching Awards

- ♦ 2004 Outstanding Teacher Award-Kettering University,
- ♦ 1995 U. S. Naval Academy Mechanical Engineering Department Teaching Excellence Award,
- ♦ 1994 SAE International Ralph R. Teetor Educational Award in Recognition of Significant Contributions to Teaching, Research and Student Development,
- ♦ Outstanding Teaching Assistant Fellowship (U of Michigan, 1990),
- ♦ Minority Engineering Program Tutor (U of Michigan, 1990),
- ♦ Letters of Commendation from College of Engineering Dean for Excellence in Teaching (U of Michigan, 1990)

Professional Society Honors

- ♦ 2009 Small Engine Technology Conference, SAE and SAE of Japan, Certificate of Appreciation for significant contributions at the SETC conference,
- ♦ 2006 SAE International Outstanding Section Member Award-Mid-Michigan Section in Recognition of Extraordinary Achievement by a Mid-Michigan Section Member,
- ♦ 2006 American Society of Mechanical Engineers (ASME) recognition of long term membership
- ♦ 2002 SAE International Award for Excellence in Oral Presentation- Powertrain & Fluid Systems Conference,

- ◆ 1994 SAE Baltimore Section Recognition of Service Award for Outstanding Leadership as Section Activities Chair

Advisory Boards & Directorships

- ◆ Elected to the Society of Automotive Engineers (SAE) International Board of Directors (2007-2010),
- ◆ Member of the Advisory Board, National Institute for Advanced Transportation Technology, Center for Clean Vehicle Technology, University of Idaho-Moscow, (2007-Present),
- ◆ Chair, SAE International Engineering Education Board (2002-2005),
- ◆ Member, SAE International Education Board (2010-2013),
- ◆ Director, SAE International Publications Board (2005-2008)

Professional Society Membership & Activities

Tau Beta Pi, Pi Tau Sigma, American Society of Engineering Educators (Author and Reviewer), American Society of Mechanical Engineers (Author and Reviewer), Triangle Fraternity, Trustee and Vice-President-Triangle Fraternity Education Foundation (2001-2003), Institution of Mechanical Engineers (Reviewer- Journal of Automobile Engineering)

Society of Automotive Engineers:

- ◆ SAE International Board of Directors (Director, 2007-2010);
- ◆ Education Board (Chair, 2002-2005; Member, 1994-present);
- ◆ Publications Board of Directors (Director, 2005-2008);
- ◆ Collegiate Design Series (formerly University Programs Committee) (Chair, 1998-2004, 2011-2014; member, 1994-2009),
- ◆ SAE Faculty Advisor (1992-95, 1998-present);
- ◆ Ralph Teetor Committee (Chair-2012-present, 2004-present);
- ◆ Member of Excellence in Engineering Education Award Committee;
- ◆ Clean Snowmobile Challenge Faculty Advisor (2000-present),
- ◆ A World in Motion Program Office (Member, 2003-2009);
- ◆ Student Relations Chairman (1995-96),
- ◆ Project Director for the 1991-5 Hybrid Electric Vehicle Challenges, and the 1996 Formula Competition,
- ◆ FutureCar Faculty Advisor (1996-97),
- ◆ Ethanol Challenge Faculty Advisor (1998-2000),
- ◆ Technical Paper Reviewer and Session Moderator

Professional Consulting in Engineering Legal Proceedings:

The following list summarizes my testimony with regard to professional consulting for engineering legal proceedings since 2009 (last four years).

- ◆ Consulting Expert, Paul, Weiss, Rifkind, Wharton & Garrison, LLP, 2013 to Present, provided *Deposition and Hearing testimony*
 - Hired expert witness on behalf of Respondents Trico Corporation, Trico Products and Trico Components SA de CV
 - Re: Certain Windshield Wiper Devices and Components Thereof, Inv. No. 337-TA-881, before the Honorable Charles E. Bullock, Chief Administrative

Law Judge of the United States International Trade Commission, Washington, D.C.

- ◆ Consulting Expert, Brooks & Kushman, P. C., 2011 to Present, provided *Deposition testimony*
 - Hired on behalf of the Defendants Corea Autoparts Producing Corporation, CAP America Corporation, Inc., and PIAA Corporation, USA
 - *CERTAIN WIPER BLADES, Investigation No. 337-TA-816*, before the Honorable Charles E. Bullock, Chief Administrative Law Judge of the United States International Trade Commission, Washington, D.C.
- ◆ Consulting Expert, Brinks Hofer Gilson & Lione, P. C., 2013 to Present
 - Hired on behalf of the Defendants Snap-On Inc. and Drew Technologies, Inc.,
 - *Robert Bosch LLC v. Snap-On Inc. and Drew Technologies, Inc., which is pending in the United States District Court, Eastern District of Michigan, Civil Action No. 12-11503-RHC-MAR*
- ◆ Consulting Expert, Kimley-Horn and Associates, Inc., 2011 to 2013
 - Hired on behalf of the Defendants in the matter of
 - *Gamarra v. Gibraltar Cable Barrier Systems, et al., Case Number 502008CA027405XXXXMBAG*, Palm Beach County Circuit Court
- ◆ Consulting Expert, Brinks Hofer Gilson & Lione, P. C., 2011
 - Hired on behalf of the Respondents PROGRESSIVE CASUALTY INSURANCE COMPANY in the matter of
 - *INNOVATIVE GLOBAL SYSTEMS, LLC V ONSTAR, LLC ET AL E.D. TEXAS, CASE NO. 6:10-CV-00574*
- ◆ Consulting Expert, Brooks & Kushman, P. C., 2009,
 - Hired on behalf of the Plaintiff Magnadyne Corporation
 - *CERTAIN AUTOMATIVE PARTS*, Consolidated Civil Actions Case No. CV 09-1763 AHM (VBKx), & Case No. CV09-1937 FMC (FMOx), UNITED STATES DISTRICT COURT, CENTRAL DISTRICT OF CALIFORNIA, WESTERN DIVISION
- ◆ Consulting Expert, Brooks & Kushman, P. C., 2008 to 2009, provided *Deposition testimony*
 - Hired on behalf of the Complainant Ford Motor Corporation
 - *CERTAIN AUTOMATIVE PARTS*, Inv. No. 337-TA-651, before the Honorable Theodore R. Essex of the United States International Trade Commission, Washington, D.C.

Selected Publications & Presentations:

Technical and Text Books

- ◆ **Davis, G. W., Hoff, C. J., Borton, Z., Ratcliff, M. A.,** “Legacy Vehicle Fuel System Testing with Intermediate Ethanol Blends,” National Renewable Energy Laboratory, Technical Report NREL/TP-5400-53606, March 2012

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