

CURRICULUM VITAE

LEA-DER CHEN, Ph.D.

Professor, Mechanical Engineering
Director, School of Engineering and Computing Sciences
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Texas A&M University - Corpus Christi
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PERSONAL

U.S. Citizen
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EDUCATION

Ph.D. in Mechanical Engineering, The Pennsylvania State University (1981)
Advisor: Professor Gerard M. Faeth
M.S. in Mechanical Engineering, The Pennsylvania State University (1979)
Advisor: Professor Gerard M. Faeth
B.S. in Mechanical Engineering, The National Taiwan University (1974)

PROFESSIONAL EXPERIENCE

- A. Texas A&M University-Corpus Christi, Corpus Christi, TX 78412; 2010-Present**
 - Associate Dean/Associate Dean for Research, College of Science and Engineering (2011-present)
 - Professor and Director, School of Engineering and Computing Sciences, College of Science and Engineering (2011-present)
 - Professor and Associate Dean of Engineering, College of Science and Technology (2010-2011)
- B. The University of Iowa, Iowa City, IA 52242; 1982-2010**
 - Chair/Department Executive Officer (DEO), Department of Mechanical & Industrial Engineering (2005-2010)
 - Director, National Advanced Driving Simulator (NADS) (1999- 2006; Interim Director, 1998-1999)
 - Chair/Department Executive Officer, Department of Mechanical Engineering (1993-1998; Interim Chair/Interim Department Executive Officer, 1992-1993)
 - Professor, Department of Mechanical Engineering and Department of Mechanical and Industrial Engineering (1991-2010)
 - Associate Professor, Department of Mechanical Engineering (1986-1991)
 - Assistant Professor, Department of Mechanical Engineering (1982-1986)
- C. The Pennsylvania State University, University Park, PA 16802; 1981-1982**
 - Assistant Professor (Non-tenure Track), Department of Mechanical Engineering (1981-1982)
 - Research Associate and Research Assistant, Department of Mechanical Engineering and Applied Research Laboratory (1980-1981)

D. Summer & Intergovernmental Personnel Act (IPA)

Visiting Summer Faculty/Scientist, Aero Propulsion and Power Directorate, Air Force Research Lab (AFRL), WPAFB, Ohio (1987-1993)

IAP Visiting Scientist, AFOSR/Aero Propulsion and Power Directorate, AFRL, WPAFB, Ohio (1988-1989)

Summer Faculty Fellow, Aero Propulsion and Power Directorate, AFRL, WPAFB, Ohio (1985-1986)

HONORS AND AWARDS

National Science Foundation, Research Initiation Grant (1983)

University of Iowa Old Gold Faculty Fellowship (1983)

AFOSR/UES Summer Faculty Fellowship (1985, 1986)

Winner of the APS Division of Fluid Dynamics Annual Gallery of Fluid Motion (1986, 1987, 1992; jointly with W.M. Roquemore, et al.)

AIAA Aerospace Sciences Meeting Poster Merit Award (1987; jointly with W.M. Roquemore, et al.)

AFOSR University Resident Faculty Fellow Award (1988-1989)

NASA USMP-4/STS-87 Columbia Space Shuttle Mission, Investigator of Glovebox Investigation of Enclosed Laminar Flames/ELF (1997)

The University of Iowa College of Engineering Service Award (2001)

Texas A&M University-Corpus Christi College of Business Coastal Bend Business Innovation Center Faculty of the Year Award (2011)

PROFESSIONAL SOCIETIES

American Society of Mechanical Engineers

American Society for Engineering Education

American Institute of Aeronautics and Astronautics (Senior Member)

The Combustion Institute

CLASSROOM TEACHING

Taught (and developed) courses at undergraduate, intermediate and doctoral levels.

A. The University of Iowa

Heat Transfer, Experimental Engineering, Engineering Analysis, Intermediate Heat Transfer, Combustion and Propulsion, Propulsion Engineering, Combustion Engineering, Fuel Cells, Multiphase Flow and Heat Transfer, Combustion Theory, Individual Investigations, Undergraduate and Graduate Seminars.

B. Texas A&M University-Corpus Christi

Fluid Mechanics, Fluid Mechanics-Fluid Power, Heat Transfer, Thermal System Design, Fuel Cells, Directed Independent Study.

CURRENT RESEARCH AREAS

Liquid Metal Combustion, Energy Storage, Propulsion and Power of UAV, Chemically Reacting Flows, Thermal Sensors.

GRADUATE STUDENT SUPERVISION & MENTORING (THE UNIVERSITY OF IOWA)**A. Ph.D. Dissertation Advisor (Unless Specified Otherwise)**

1. Chan-Jun Park (1987; After Graduation: Hyundai Motor Co., South Korea)
2. James P. Seaba (1990; After Graduation: Assistant Professor at University of Missouri-Columbia)
3. J.-G. (James) Lee (1990; After Graduation: CFD Research Corp.)
4. H.-Y. (Simon) Lyu (1991; After Graduation: Daihatsu Motor Co., Taiwan)

5. S.-H. (Stan) Wu (1991; After Graduation: Cummins Inc.)
6. K.-Y. (Mark) Hsu (1991; After Graduation: Innovative Scientific Solutions, Inc.)
7. S. (Simon) Lee (1992; After Graduation: Cummins Inc.)
8. H.-W. Lin (1993; After Graduation: Mitutoyo-America)
9. J.-C. Sheu (1996; After Graduation: CFD Research Corp.)
10. Naif M. Al-Abadi (1996; After Graduation: King Abdulaziz City for Science and Technology, Saudi Arabia)
11. Y.C. (Carol) Chen (1997; After Graduation: Rockwell International)
12. P.C. (Jay) Sui (1997; After Graduation: Post-doctoral Research Associate at University of Iowa)
13. Yong Lee (1997; After Graduation: Post-doctoral Research Associate at University of Iowa)
14. Kezhong Jia (2000; After Graduation: Chase Manhattan Bank)
15. Peter W. Green (2001; Co-advised with P.B. Butler; After Graduation: Post-doctoral Research Associate at University of Iowa)
16. Rajasekhar Venuturumilli (2005; After Graduation: Create FLUENT)
17. Andre Schaeffer (2005; Advisor on Record with J. Cremer; After Graduation: GM Tech Center)
18. Mingfei Gan (2006; After Graduation: Carrier Corp.)
19. Ge Zhou (2007; After Graduation: UTC Power)
20. Yong Miao (2008; After Graduation: GM Tech Center)

B. M.S. Thesis Advisor (Unless Specified Otherwise)

1. Aaron S. Hu (1984; After Graduation: Pratt-Whitney)
2. Alvin K. Lew (1985; After Graduation: Graduate Study at UC-Berkeley)
3. Debra Kehret (1985; After Graduation: Pratt-Whitney)
4. K.-Y. (Mark) Hsu (1986; After Graduation: Ph.D. Study at University of Iowa)
5. S.-H. Wu (1986; After Graduation: Ph.D. Study at University of Iowa)
6. I.-P. Chung (1987; After Graduation: Ph.D. Study at UC-Irvine)
7. J.-G. (James) Lee (1987; After Graduation: Ph.D. Study at University of Iowa)
8. Raymond C. Damaso (1992; After Graduation: Rockwell-Collins)
9. P. C. (Jay) Sui (1992; After Graduation: Ph.D. Study at University of Iowa)
10. Ramtilak Ananthan (1993; After Graduation: Bajaj Auto Co., India)
11. Ronald W. Schwing (1994; After Graduation: Air Force Research Laboratory, WPAFB, Ohio)
12. Robert T. Foster (1994; After Graduation: Air Force Research Laboratory, WPAFB, Ohio)
13. John R. Krieger (1995; After Graduation: FMC)
14. Honan Bang (1996; After Graduation: Hyundai Motor Co.)
15. L.B. Tran (1998; After Graduation: Universität-Gesamthochschule Duisburg, Germany)
16. Y.L. Cheng (1999; After Graduation: CDI)
17. Matt Bushore (2000; After Graduation: Schlumberger)
18. Z. Xiong (2001; Co-advised with P.B. Butler; After Graduation: Chrysler)
19. Brian Ryan (2002; After Graduation: Ph.D. Study at University of Iowa)
20. Mingfei Gan (2002; After Graduation: Ph.D. Study at University of Iowa)
21. Yong Zhang (2003; After Graduation: International Trucks/Navistar)
22. Jeremy Schaeffer (2004; After Graduation: Carleton Life Support Systems)
23. Adam Harwood (2004; After Graduation: US Army ARDEC, Rock Island Arsenal, Rock Island, IL.)
24. Matt Tinker (2006; After Graduation: Caterpillar, Inc.)
25. Andrew Feldick (2007; After Graduation: Ph.D. Study at Penn State U.)
26. Matthew Wilkey (2007; After Graduation: Stanley Consulting Co.)
27. Ryan Dudgeon (2009; After Graduation: EPRI Lab, South Carolina)
28. Tim Kennelly (2009; After Graduation: Exelon)
29. Nicole Heacock (2009; After Graduation: Packard Engineering)

30. Jonathan Zeman (2009; After Graduation: Gamma Technologies)
31. Jun-Chun Wong (2010; After Graduation: Industrial Technology Research Institute, Taiwan)
32. Kevin Langan (2010; After Graduation: KJWW Engineering Consultants)
33. Ankush Bhasin (2010; After Graduation: Cummins Inc.)
34. Sameer Khan (2010; Advisor on Record)
35. Amit Udas (2011; After Graduation: HNI Corp.)
36. Michael Kelso (2011; After Graduation: LMS-CADSI)

C. M.S. Student Non-Thesis Advisor

1. P. S. (Peter) Tschen (1990; After Graduation: McDonnell Douglas Corp.)
2. R. Roseke (1995; After Graduation: Iowa Electric Co.)
3. Brandon F. Devine (1996)
4. Mike E. Kovar (1996; After Graduation: Norand)
5. J.M. Jam (1997; After Graduation: Republic of China/Taiwan Navy)
6. Rajasekhar Venuturumilli (2002; After Graduation: Ph.D. Study at University of Iowa)

D. Post-Doctoral Researcher, Research Scientist, Visiting Faculty/Scholar

1. Mr. Z.T. Sang (1990)
2. Dr. K.Y. (Mark) Hsu (1992-1993)
3. Dr. J.C. Sheu (1996)
4. Prof. K. Khahil (1996-1997)
5. Dr. Yong Lee (1997-1998)
6. Dr. P.C. (Jay) Sui (1997-2003)
7. Dr. Yongming Lin (1998-2001)
8. Prof. S.H. Chuang (1998)
9. Prof. Chan-Jun Park (1998-1999)
10. Dr. Peter W. Green (2001-2002)
11. Prof. Chang Xu (2008-2009)
12. Mr. Tiezheng Guo (2009-2010)
13. Prof. Ki Hong Byun (2009-2010)
14. Prof. Guanping Wang (2018-present)

PROFESSIONAL SERVICE

A. National

1. ASME Propulsion Technical Committee (Member, 1992-Present; Secretary, 2017-2019)
2. Propulsion and Energy, formerly AIAA/ASME/SAE/ASEE Joint Propulsion Conference (Session Organizer – Propulsion and Power of Unmanned Systems, 2015-2019; Session Organizer and Chair of SCF Heat Transfer and Thermo-acoustics, 33rd-34th JPC, 1997-1998; High Energy Density Fuels and Marine Propulsion Session Organizer and Chair, 28th- 32nd JPC, 1992-1996; High Energy Density Fuels Session Co-Chair, 27th JPC, 1991)
3. ASME International Mechanical Engineering Congress and Exposition (Advances in Aerospace Technology, Topic Organizer, 2014- 2018)
4. 246th American Chemical Society National Meeting (Nanostructured Materials for Next-Generation Energy Storage and Conversion Session Moderator, 2014)
5. The Combustion Institute Central States Section (Chair, 2005-2007; Chair-Elect, 2003-2004; Officer of Board of Advisors, 2001-2009; Member of Board of Advisors, 1998-2009)
6. The Combustion Institute U.S. Sections Executive Committee (Member, 2005-2009)
7. The Combustion Institute Joint U.S. Sections Meeting (Program Chair of Chicago Meeting, 2003)
8. The Combustion Institute Central States Section Technical Meeting (Program Chair of Knoxville Meeting, 2002; Session Co-Chair of Cincinnati Meeting, 1990)

9. Program Sub-Committee, 21st to 26th Symposium (International) on Combustion, The Combustion Institute (Member, 1986-1996)
10. APS/AIP Physics Computing (Boundary Conditions Session Organizer and Chair, 1991)
11. International Symposium on Refined Flow Modeling and Turbulence Measurements (Member of the Steering Committee, 1984).
12. NASA Microgravity Combustion Program (Panelist of Reflight Review Science Panel, 1997; Panelist of Concept of Design Review Science Panel, 1991)
13. Building and Fire Research Division Program Review, National Institute of Standards and Technology (Reviewer, 1993)
14. EPA Environmental Engineering Exploratory Research Program (Review Panelist, 1998)
15. Review Panel for NSF Programs (Panelist, 2002, 2003, 2007, 2009, 2010, 2012, 2016, 2017, 2018)
16. Review Panel of Army 6.1 Research Programs, Office of Under Secretary of Defense (Panelist, 2004)
17. Ad Hoc Steering Committee, Three Rivers Manufacturing Technology Consortium, Moline, IL (Member, 2005-2008)
18. Associate Editor, International Journal of Reacting Systems/Journal of Combustion (2007-2012)

B. State

1. Texas Higher Educational Coordinating Board State, Mechanical Engineering Field of Study Subcommittee (Member, 2016)
2. Tropical Texas RCIC Scientific Advisory Pool (Member, 2012)

C. Regional

1. Coastal Bend Business Plan Competition Organizing Committee (Member, 2010-2015)
2. Coastal Bend Post Board of Directors, Society of American Military Engineers (Member, 2016-2018)

D. Texas A&M University – Corpus Christi

University

1. TRDF Review Committee of the Office of Vice President of Research, Commercialization and Outreach (Member, 2012-2013)
2. Search Committee of Founding Dean of the College of Graduate Studies (Member, 2012-2013)
3. Export Control Committee (Member, 2013-present)
4. Institutional Efficiency Study Group (Member, 2014-2015)
5. Life Sciences, Research and Engineering Building Working Group (Member, 2014-2015)
6. IDC Policy Working Group (Member, 2015-2016)
7. Internal Grant Review Committees, Division of Research and Innovation/formerly the Division of Research, Commercialization and Outreach (Member, 2014-present)

College

1. College of Science and Engineering Steering Committee (Chair, 2011-2018)
2. College Strategic Planning Committee (Chair, 2014-2015)
3. Department Chair (Life Sciences) Search Committee (Chair, 2019)

E. The University of Iowa

University

1. Iowa Laser Facility Advisory Committee (Member, 1986-1989)
2. Iowa Advanced Technology Laboratory User Utilization Committee (Member, 1993-2000)
3. Graduate Council (Member, 1993-1994)
4. The University Strategic Planning Committee (Member, 1994-1997; Research and Scholarship Sub-Committee Chair, 1994-1995; Indicator Sub-Committee Member, 1996-1997)
5. Biosciences Initiative Advisory Committee (Member, 1994-1998)

6. The College of Medicine SIREN Committee (Member, 2000-2001)
7. The GAANN Committee for Graduate Student Support (Member, 2003-2010)
8. Advisory Group of the Office of The Vice President for Research (Member, 2004-2006)
9. The Iowa Alliance for Wind Innovation and Novel Design, The University of Iowa Campus Coordinator (2008-2010)
10. The Provost's College of Engineering Decanal Review Committee (Chair, 2004)

College

1. The College Computer Committee (Member, 1982-1984)
2. Engineering Faculty Council (Member, 1984-1987; Secretary, 1985-1986; Member, 2003-2005)
3. The College Lectures Committee (Chair, 1989-1990)
4. The College Curriculum Committee (Member 1990-1992; Chair, 1991-1992; Member, 1999; Chair, 2000)
5. Supplemental P&T Review Panel (Member, 1992-1993)
6. Iowa Institute of Hydraulic Research Director Search Committee (Member, 1992-1993)
7. The College Strategic Planning Committee (Member, 1994-1995)
8. The College Curriculum Advancement Task Force (Member, 1995-1996)
9. The College Climate Task Force (Chair, 1996)
10. The College Development Council Steering Committee (Member, 1996-1999)
11. The College Self-Study Committee (Chair, 1996-1997)
12. The College Committee on Graduate Programs (Member, 2001-2002)
13. The College P&T Committee (Chair, 2003 and 2004)
14. The College Blue Ribbon Committee (Member, 2003)
15. The College Department Executive Officer/Department Chair Search Committees: Departments of (a) Biomedical Engineering and (b) Electrical and Computer Engineering (Member, 2008)

Department

1. Graduate Committee (Member, 1983-1985; Chair, 1984-1985; Member, 1999-2001)
2. Undergraduate Committee (Member, 1987-1992; Chair, 1998-1999; Member, 1998-1999; Member, 2001-2005)
3. Undergraduate Lab Equipment Committee (Chair, 1988)
4. Faculty Search Committee (Chair, 1986-1987; Member, 1987; Member, 1991-1992)
5. Department Strategic Planning Committee (Chair, 1995).
6. Mechanical and Industrial Engineering Department Executive Officer/Department Chair Search Committee (Chair, 2000)
7. Mechanical and Industrial Engineering Appropriate Faculty Group for promotion and tenure review (P&T Committee; Chair, 2001-2003)

GRANTS & CONTRACTS AS PI (Unless Specified Otherwise)

A. Texas A&M University – Corpus Christi

1. InnerGeo, "Development of Simulation Capability for Closed Loop Geothermal Heat Exchange System," \$90,886 (06/2011-05/2014).
2. Nuclear Regulatory Commission, "Curriculum and Laboratory Development on Condition Monitoring and Diagnosis with Application to Nuclear Power Generation," \$150,000 (PI: P.A. Simionescu; Co-PI: H.B. Karayaka and L.D. Chen, 06/2011-05/2014).
3. Photon8, "Development of Simulation Capability for Bio-flow Reactor," \$49,859 (06/2013-05/2014).
4. Texas A&M Engineering Experiment Station, Nuclear Power Institute, "Autonomous Robot for In-pipe Inspection (ARII) of Nuclear Power Plant Cooling Systems: Design and Feasibility Study," \$15,000 (01/2014-08/2014).

5. Texas A&M Engineering Experiment Station, Nuclear Power Institute, "Prototyping of Autonomous Robot for In-pipe Inspection (ARII)," \$33,000 (01/2015-08/2015).
6. Texas A&M Engineering Experiment Station, Nuclear Power Institute, "iPower: Innovative Power System for Miniature Thermal Sensors," \$40,000 (09/2015-08/2016).
7. Texas A&M Engineering Experiment Station, Nuclear Power Institute, "Non-intrusive Thermal Measurements," \$59,620 (01/2018-08/2019).
8. National Science Foundation, "CREST Center for Innovations Using Autonomous Systems for Extreme Conditions," \$4,921,817 (09/01/2019-08/31/2024; pending).
9. Supported the Division of Institutional Advancement applications for City of Corpus Christi Type A Grant for support of (a) proposed Electrical Engineering B.S. Degree Program (\$1,000,000 funded, 2014) and (b) proposed Civil and Industrial Engineering B.S. Degree Programs (\$2,000,000 committed, 2016).

B. The University of Iowa

1. NSF, Research Initiation Grant, "An Investigation of Confined, Particle Laden, Turbulent Jets," \$47,971 (6/1/1983 -11/31/1985).
2. University of Iowa Old Gold Faculty Summer Fellowship, \$3,000 (6/1/1984 - 8/1/1984).
3. NIH/U. Iowa, Biomedical Research Grant: "Heat and Water Vapor Transport in Human Upper Airways," \$7,500 (1/1985-12/1985).
4. University of Iowa Office of the Vice President for Educational Development and Research, "Gas Chromatography and Data Acquisition," \$7,000 (1985).
5. Air Force Office of Scientific Research, "An Experimental Investigation of Turbulent Jet Diffusion Flames," \$19,962 (1/1986-12/1986).
6. Colt Industries, "Modeling of Airblast Swirl Atomizer," \$5,500 (9/1986-1/1987).
7. The University of Iowa Office of the V.P. for Educational Development and Research, "Pilot Project on Laser Augmented Ignition and Combustion," \$14,165 (10/1987-5/1988).
8. Air Force Office of Scientific Research, "Visualization of Jet Diffusion Flames," \$19,967 (1/1987-12/1987).
9. Air Force Wright Aeronautical Lab/Geo-Centers Scholarly Research Program, "Jet Diffusion Flame Data Analysis," \$85,504 (plus \$5,000 University of Iowa Matching Fund; 6/1987-12/1988); "Jet Diffusion Flame Data Analysis - Revised Task," \$28,881 (10/1988-4/1989).
10. Air Force Office of Scientific Research, "Spray Combustion," \$18,159 (9/1987-8/1988); \$19,330 (9/1988-8/1989), \$20,000 (9/1989-8/1990).
11. Air Force Office of Scientific Research University Resident Research Program, "Jet Diffusion Flames," \$54,555 (12/1988-8/1989).
12. Office of Naval Research, "Wick-Type Liquid Metal Combustion," \$192,606 (plus \$20,000 University of Iowa Matching Fund; 10/1988-4/1991).
13. NSF Engineering Research Equipment, "Advanced Combustion Diagnostics," \$50,000 (plus \$76,168 University of Iowa Matching Fund; 7/1989-7/1991).
14. NSF and Air Force Wright Lab (Joint Funding), "Development of Advanced Diagnostics and Their Applications to Jet Diffusion Flames," \$94,000 (9/1989-9/1990); \$156,000 (9/1989-7/1992).
15. Cummins Inc., "Fuel System Electronics Development," \$22,400 (1/1990-12/1990).
16. Air Force Wright Lab (Subcontract from Systems Research Lab), "Jet Diffusion Flames," \$50,000 (10/1991-9/1992).
17. Office of Naval Research, "Wick-Type Liquid Metal Combustion Incremental Funding," \$66,698 (5/1991-5/1992).
18. NSF, "Transport Modeling of CVD and LCVD," \$200,000 (plus \$62,000 University of Iowa Matching Fund; PI: S.D. Allen, Co-PI: L.D. Chen; 8/1991-8/1993).

19. Air Force Office of Scientific Research, "Heat Transfer, Fouling, and Combustion of Supercritical Fuels," \$214,000 (plus \$20,000 University of Iowa Matching Fund, 1992-1993).
20. CFD Research Corp., "Transport in Supercritical Fluids," AFOSR SBIR Phase I \$14,000 (7/1992-12/1992); AFOSR SBIR Phase II, \$102,050 (10/1993-9/1995).
21. Air Force Wright Lab (Sub-contract through Systems Research Laboratories), "Heat Transfer, Fouling, and Combustion of Supercritical Fuels," \$130,000 (1/1994-12/1994).
22. NASA, "Buoyancy Effects in Diffusion Flames," \$315,716 (9/1994-8/1998); \$75,000 (4/1998-11/1998).
23. NSF San Diego Supercomputer Center, "Vortex-Flame Interaction on Species Formation," 48 Hours (Cray C90; 1995).
24. Air Force Wright Lab (Sub-contract through Innovative Scientific Solutions, Inc.), "Thermal Management of Fuel System," \$50,000 (1/1997-12/1997).
25. GM/DOT, "Airbag Experimentation," \$300,000 (PI: P.B. Butler, Co-PI: L.D. Chen; 10/1997-3/1999).
26. Honda R&D Americas Honda Initiation Grant, "Novel Reformation Concept," \$25,000 (8/1997-7/1998); "Literature Review-Fuel Processing," \$23,200 (12/1998-3/1999); "Fuel Processor," \$50,000 (6/1999-5/2000).
27. Honda Automobile R&D Center (Tochigi, Japan), "Fuel Cell Simulation," \$78,023 (9/1997-3/1998); \$167,159 (4/1998-3/1999); \$184,721 (4/1999-3/2000); \$184,721 (4/2000-3/2001); \$199,285 (4/2001-3/2002); \$79,714 (5/2002-5/2003).
28. Honda Automobile R&D Center (Tochigi, Japan), "1-D Fuel Cell Testing," \$64,508 (3/1999-2/2000).
29. Honda R&D Americas, "Advanced Gas Separation," \$75,000 (8/2002-4/2003); \$11,600 (4/2003-9/2003).
30. NASA, "Reflight of ELF," \$82,500 (plus \$4,000 University of Iowa Matching Fund; 10/1999-9/2000); \$82,000 (plus \$3,000 University of Iowa Matching Fund, 10/2000-9/2001); \$88,500 (plus \$2,500 University of Iowa Matching Fund), 10/2001-9/2002); \$86,000 (plus \$2,500 University of Iowa Matching Fund, 10/2002-4/2006).
31. Deere & Co., "Deere Virtual Proving Ground," \$106,228 (7/2001-6/2002); \$20,117 (7/2002-12/2002); \$153,535 (9/2002-3/2003); \$108,938 (1/2005-9/2006).
32. ConocoPhillips, "Advanced Thermal Systems," \$10,000 (7/2002-8/2002); \$50,000 (11/2002-7/2003); \$149,000 (8/2003-12/2004); \$24,000 (1/2004-5/2004); \$120,000 (1/2005-12/2005); \$75,000 (1/2006-8/2006).
33. Army TARDEC, "ARC Projects," \$400,000 (2001); \$300,000 (2002); \$200,000 (2003); \$200,000 (2004); \$100,000 (2005); \$80,000 (2006).
34. Director/Site Director, National Science Foundation Industry/University Cooperative Center for Virtual Proving Ground Simulation (2000-2009); \$453,960 (11/2003-10/2008).
35. Caterpillar Co., "Virtual Proving Ground Simulation," \$299,000 (12/2004-4/2006); \$162,112 (3/2006-2/2007).
36. The U.S. Army ARDEC, "Simulation Capabilities," \$40,000 (4/2006-7/2006); "Vehicle Modeling & Simulation," \$60,000 (08/2007-7/2009); "Vehicle Tire Testing & Modeling," \$60,000 (01/2009-10/2009); "Virtual Evaluation Development," \$35,000 (01/2009-10/2009); "Vehicle Parameter Measurements," \$125,000 (03/2009-10/2009); "Development of Durability Capability for Immersive Testing Evaluation under W52H09-08-D-0266," \$80,000 (10/2009-09/2011); "Refinement of Immersive Testing Evaluation under W52H09-08-D-0266," \$100,000 (07/2009-12/2010).
37. Honda R&D Americas, "Fuel Cell Research," \$10,000 (4/2008-12/2008).
38. ConocoPhillips, "Equivalent RON and MON," \$260,000 (4/2008-4/2010).

39. Indefinite Quantity Contract from the U.S. Department of Transportation to the University of Iowa totaled over \$10,000,000 for projects conducted at the National Advanced Driving Simulator located at the University of Iowa Oakdale Research Park, 2001-2006.

CONSULTANCY

Served as Consultant to ConocoPhillips, Honda R&D Americas, Honda Research Institute, Diamond QC/Quadrise, Systems Research Lab, Wiley & Associates, Marley Pumps and as Technical Advisor to InnerGeo and WaterReco.

Currently serving as Consultant to Gas Technology Institute, Chicago, IL.

PATENTS

1. Seaba, J.P. and Chen, L.-D., "Multi-Purpose Microchannel Micro-Component," European Patent Office, Patent No. EP1320712, WO 02/103268 A2, 2003.
2. Seaba, J.P. and Chen, L.-D., "Method for Processing Fluid Flows in a Micro Component Reformer System," U.S. Patent No., 6946113, September 2005.

PUBLICATIONS

A. Journal and Archival Publications

1. Chen, L.-D. and Faeth, G.M., "Initiation and Properties of Decomposition Waves in Liquid Ethylene Oxide," Combustion and Flame, 40:3-28, 1981.
2. Chen, L.-D. and Faeth, G.M., "Ignition of a Combustible Gas Along Heated Vertical Surfaces," Combustion and Flame, 42:77-92, 1981.
3. Chen, L.-D. and Faeth, G.M., "Ignition of Supercritical Fluids During Natural Convection from a Heated Vertical Surface," Combustion and Flame, 44:169-183, 1982.
4. Chen, L.-D. and Faeth, G.M., "Condensation of Submerged Vapor Jets in Subcooled Liquids," ASME Journal of Heat Transfer, 104:774-780, 1982.
5. Jeng, S.-M., Chen, L.-D., and Faeth, G.M., "The Structure of Methane and Propane Diffusion Flames," 19th Symposium (International) on Combustion, The Combustion Institute, pp. 349-358, 1982.
6. Shuen, J.-S., Chen, L.-D., and Faeth, G.M., "Evaluation of a Stochastic Model of Particle Dispersion in a Turbulent Round Jet," AIChE Journal, 29:167-170, 1983.
7. Chen, L.-D. and Faeth, G.M., "Structure of Turbulent Reacting Gas Jets Submerged in Liquid Metals," Combustion Science and Technology, 31:277-296, 1983.
8. Shuen, J.-S., Chen, L.-D., and Faeth, G.M., "Predictions of the Structure of Turbulent, Particle Laden, Round Jets," AIAA Journal, 21:1483-1484, 1983.
9. Yan, M.-M., Chen, L.-D., and Faeth, G.M., "Analysis of Ignition by a Plane Laminar Thermal Plume," Combustion and Flame, 58:1-12, 1984.
10. Ogle, R.A., Beddow, J. K., Vetter, A.F., and Chen, L.-D., "Thermal Radiation Transport in Laminar Premixed Dust Flames," Combustion and Flame, 58:77-79, 1984.
11. Solomon, A.S.P., Rupprecht, S.D., Chen, L.-D., and Faeth, G.M., "Flow and Atomization in Flashing Injectors," Atomization and Spray Technology, 1:53-76, 1985.
12. Chen, L.-D. and Roquemore, W.M., "Visualization of Jet Flames," Combustion and Flame, 66:81-86, 1986.
13. Chen, L.-D., Seaba, J.P., Roquemore, W.M., and Goss, L.P., "Buoyant Diffusion Flames," 22nd Symposium (International) on Combustion, The Combustion Institute, pp. 677-684, 1988.
14. Smith, T.F., Byun, K.-H., and Chen, L.-D., "Effects of Radiative and Conductive Transfer on Thermal Ignition," Combustion and Flame, 73:67-74, 1988.

15. Ogle, R.A., Beddow, J. K., Chen, L.-D., and Butler, P.B., "An Investigation of Aluminum Dust Explosion," Combustion Science and Technology, 61:75-99, 1988.
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