

List of Presentations

(Available upon Request)

Conferences and Symposia

- American Nuclear Society, 18th Topical Meeting on the Technology of Fusion Energy (TOFE-18), San Francisco, CA, September/October 2008.
Presentation: *Measurements of specific electrical contact resistance between SiC and Lead-Lithium eutectic alloy*
- National Academy of Engineering, 2008 Indo-American Frontiers of Engineering Symposium, Irvine CA, February/March, 2008
Invited Presentation: *The Technological Challenge of ITER and Magnetic Fusion Energy*
- 8th International Symposium on Fusion Nuclear Technology (ISFNT-8), Heidelberg, GR, Sep-Oct. 2007
Invited Presentation: *Recent R&D for the Dual Coolant Lead-Lithium Blanket Concept in the US*
Presentation: *MHD Simulations of Liquid Metal Flow Through a Toroidally-Oriented Manifold*
- 12th International Conference on Fusion Reactor Materials, Santa Barbara, California, Dec. 2005.
- Fusion Power Associates Annual Symposium, Washington, DC, Sep. 2005
Invited Presentation: *Fusion Nuclear Technology Research and Opportunities for ITER Utilization*
- 7th International Symposium on Fusion Nuclear Technology, Tokyo, Japan, May 2005.
Invited Presentation: *Overview of Fusion Nuclear Technology in the US.*
Presentation: *Validation Strategies in Interfacial Flow Computation for Fusion Applications*
- Fusion Power Associates Annual Symposium, Washington, DC, Dec. 2004.
Invited Presentation: *Fusion Nuclear Science and Technology Research Needed Now for Magnetic Fusion Energy*
- American Nuclear Society, 16th Topical Meeting on the Technology of Fusion Energy, Madison, WI, September 2004.
Invited Presentation: *Thermofluid Magnetohydrodynamic Issues for Liquid Breeders*
Invited Presentation: *Progress on Liquid Metal MHD Free Surface Flow Modeling and Experiments*
- American Nuclear Society, Annual Meeting and 15th Topical Meeting on the Technology of Fusion Energy, Washington DC, November 2002.
Presentation: *The MTOR LM-MHD flow facility, and preliminary experimental investigation of thin layer, liquid metal flow in a 1/R toroidal magnetic field*
- 6th International Symposium on Fusion Nuclear Technology, San Diego, April 2002.
Invited Presentation: *Modeling infinite/axisymmetric liquid metal magnetohydrodynamic free surface flows.*
Presentation: *Numerical Study of Liquid Metal Film Flows in a Varying Spanwise Magnetic Field*
- 10th International Symposium on Applied Electromagnetics and Mechanics, Tokyo, Japan, May 2001.
Presentation: *Experimental Studies of Liquid Metal Free Surface Flows.*
Presentation: *Extension of A VOF based CFD Code to MHD Free Surface Flows*
- First International Symposium on Free Surface Flow and Interfacial Transport, Yugawara, Japan, May 2001.
- American Nuclear Society, 14th Topical Meeting on the Technology of Fusion Energy, Park City, Utah, Oct. 2000.
Presentation: *Exploration of the fundamental "damage threshold" light flux for grazing incidence liquid metal mirrors*
- 5th International Symposium on Fusion Nuclear Technology, Rome, Italy, September 1999.
Invited Presentation: *Liquid Magnetohydrodynamics: Recent work and future directions for fusion.*
Presentation: *Stability and contraction of a rectangular liquid metal jet in a vacuum environment*
- Fusion Summer Study, Snowmass, Colorado, July 1999.
Presentation: *What modeling and experiments are required to establish the hydrodynamic feasibility of various thick liquid wall configurations for MFE and IFE?*
- 4th International Symposium on Fusion Nuclear Technology, Tokyo, Japan, April 1997.
Presentation: *Compressible response of thin liquid film / porous substrate first walls in IFE reactors*
- 16th IEEE/NPSS Symposium on Fusion Energy, Champaign-Urbana, IL, October 1995.
Presentation: *Geometric and blast effects on thin film protection schemes for IFE Reactors.*
- 3rd International Symposium on Fusion Nuclear Technology, Los Angeles, CA, June, 1994.
Presentation: *Initial thin flowing film experiments and the MeGA LM-MHD test facility at UCLA.*
Presentation: *Estimates of the effect of a plasma momentum flux on the free surface of a thin film of liquid*

metal.

Presentation: *Flow Balancing in Liquid Metal Blankets*

- 2nd International Symposium on Fusion Nuclear Technology, Karlsruhe, Germany, June, 1991.
Presentation: *Comparison of the core flow approximation and full solution approach for MHD flow in non-symmetric and multiple adjacent ducts*
- 9th American Nuclear Society Topical Meeting on the Technology of Fusion Energy, Oak Brook, IL, October, 1990.
Presentation: *Analysis of thin film protection of fusion reactor limiter/divertor surfaces*

Lectures, Workshops, and Meetings

- Fusion Nuclear Science and Technology Program Meeting, UCLA, Los Angeles, CA, August 2008.
Presentation: *3-D MHD Numerical Simulation and Liquid Metal Contact Resistance Measurements*
- Plasma Facing Components Program Meeting, Sandia National Laboratory, Albuquerque, NM, July 2008.
Presentation: *Thermo-capillary liquid lithium and beryllium melt layer motion simulations*
- TITAN (US/Japan Collaboration) Steering Committee Meeting, UCLA, Los Angeles, CA, February 2008.
Presentation: *TITAN Task 1-3: Flow Control and Thermofluid Modeling, 1st year (FuY 2007) progress and 2nd year plan*
- Grant Elementary School, Santa Monica, CA, December 2007.
Guest Lesson: *Where does electricity come from?*
- Thermofluid Seminar Series, Mechanical and Aerospace Engineering Department, UCLA, October 2007.
Presentation: *MHD effects in liquid flows, with emphasis on liquid metal flow control in fusion energy systems*
- US Fusion Nuclear Science / Test Blanket Module Program Meeting, UCLA, Los Angeles, CA, September 2007.
Presentation: *LM-MHD flow distribution modeling results*
- Plasma Facing Components Program Meeting, Argonne National Laboratory, Argonne, IL, June 2007.
Presentation: *Helium cooling studies of TBM first walls and modeling surface tension gradient driven free surface flows*
- Workshop on The Role of the ITER TBM in Fusion Nuclear Technology Development, ORNL, Oak Ridge, TN, May-June, 2007
Presentation: *R&D for US ITER TBMs*
Presentation: *Fusion Blanket Phenomena and Timescales*
- TITAN Kick-off Meeting, UCSD, San Diego, CA, May 2007.
Presentation: *Task 1-3 Year One Plan*
Presentation: *US ITER Test Blanket Module Program: Results of the Technical Study*
- US Test Blanket Module Program Meeting, UCLA, Los Angeles, CA, April 2007.
- TITAN (New US/Japan Collaboration – 6 years) Steering Committee Meeting, ORNL, Oak Ridge, TN, March 2007.
Presentation: *Status of Discussions on TITAN Task 1-3 “Flow control and Thermofluid modeling”*
Presentation: *US Dual-Coolant Lead-Lithium Blanket: Overview*
- JUPITER-III Planning Meeting, UCLA, Los Angeles, November 25-27, 2006.
Presentation: *Status of JUPITER-III Discussions on flow control and thermofluid modeling*
- Invited Seminar, Kyoto University, Kyoto, Japan, Oct 27, 2006
Presentation: *Dual Coolant Lead Lithium (DCLL) Blanket Concept for Fusion: Issues and R&D in the US*
- JUPITER-II Review Meeting, University of Tokyo, Tokyo, Japan, October 24-25, 2006.
Presentation: *Subtask 1-1-B Flibe Thermofluid Flow Simulation – Summary of 6-year effort*
Presentation: *Subtask 2-2 Pre-Irradiation Studies of Key Materials System Issues: SiC System Thermo-mechanics – Summary of 6-year effort*
- US Test Blanket Module Program Review Meeting, ORNL, Oak Ridge, TN, August 2006.
Presentation: *Overview of DCLL R&D and Predictive Capability Activities*
Presentation: *Other DCLL R&D Activities*
- US Test Blanket Module Program Meeting, Los Angeles, CA, Jul/Aug 2006.
Presentation: *DCLL R&D Summary*
- UCOP Forum on Performance Based Design for Nuclear energy Systems, Berkeley, CA, June 2006.

- US Fusion Experts Visit and Workshop, Czech Nuclear Research Institute, Prague, Czech Republic, June 2006.
Presentation: *Summary of US Fusion R&D.*
- IEA International Workshop on Liquid Breeder Blankets, St. Petersburg, Russia, June 2006.
Invited Presentation: *MHD Issues and Collaboration Topics for Liquid Metal Test Blanket Modules in ITER.*
- US Test Blanket Module Program Meeting, Los Angeles, CA, May 2006.
Presentation: *DCLL TBMs experimental goals and schedule strawman - what tests do we want to run and what scenarios need analysis?*
- Center for Energy Science and Technology Advanced Research (CESTAR) meeting, UCLA, Los Angeles, CA, April 2006.
Presentation: *Global Nuclear Energy Partnership - GNEP*
- Plasma Facing Components Program Meeting, San Diego, CA, March 2006.
Presentation: *HyPerComp Incompressible MHD solver for Arbitrary Geometry, Progress Summary*
- Sixth Steering Committee Meeting for Japan/US Collaborative Program JUPITER-II, Washington DC, March 2006.
Presentation: *Liquid Breeder MHD Research for Post Jupiter Collaboration*
- US-China Workshop on TBM Collaboration, Santa Barbara, CA, Dec. 2005.
Presentation: *DCLL Research and Development Summary*
- Post JUPITER Collaboration Organizing Meeting, Santa Barbara, CA, Dec. 2005.
Presentation: *Liquid breeder MHD research for Post JUPITER Collaboration*
- US Test Blanket Module Program Meeting, Idaho National Lab, Idaho Falls ID, Aug 2005.
Presentation: *DCLL test plan in ITER and strategy*
Presentation: *Introduction to R&D tasks and schedule for DCLL*
- ITER Test Blanket Working Group, Meeting of Technical Experts, Tokyo, Japan, May 2005
Presentation: *US DCLL Test Plan for ITER*
- IEA Workshop on Liquid Breeders: MHD test problems, Tokyo, Japan, May 2005
Presentation: *MHD capabilities and R&D plans in the US at UCLA*
- Workshop on Advanced Blanket Systems, Tokyo, Japan, May 2005
- Plasma Facing Components Program Meeting, Princeton, NJ, May 2005.
Presentation: *MHD Modeling and Experiments at UCLA for the ITER Test Blanket Program*
- Workshop on Advanced Fluoride Blanket Technology, Los Angeles, CA, March 2005.
Presentation: *Dual Coolant Lead Lithium Blanket*
Presentation: *Possible Post Jupiter Tasks*
- US Test Blanket Module Program Meeting, UCLA, March 2005.
Presentation: *Liquid Breeder Option Outlook*
Presentation: *Summary of US Liquid Breeder Strategy*
Presentation: *FCI Development and Issues*
Presentation: *Test Plan for Dual Coolant Lead Lithium Test Blanket Module*
- Fifth Steering Committee Meeting for Japan/US Collaborative Program JUPITER-II, Los Angeles, February 2005.
Presentation: *Summary of DCLL concept as a possible subject for Post-Jupiter Collaboration*
International Workshop on Tritium Management and Corrosion Activities for Liquid Breeder Blankets, Brasimone, Italy, September 2004.
Presentation: *Current outlook on the feasibility of SiC composite, flow channel inserts for use in dual-coolant Pb-17Li blankets*
MHD Coating Workshop, Berkeley, CA, July 2004.
Presentation: *Design Perspective on MHD Issues, Design and crack tolerance*
- US Test Blanket Module Program Meeting, UCLA, June 2004.
Presentation: *Current understanding of feasibility of SiC/SiC composites for flow channel inserts in Dual-Coolant Pb-17Li Blankets*
- Plasma Facing Components Program Meeting, Champaign/Urbana, May 2004.
Presentation: *Assessment of Motion for Initially Stagnant Thin films*
Presentation: *DiMES Slot Geometry Analysis*
Test Blanket Module Program Meeting, UCLA, February 2004.
Presentation: *Technical Strategies for Pressure Drop Reduction in LM Blankets*
- Forth Steering Committee Meeting for Japan/US Collaborative Program JUPITER-II, UCLA, Los Angeles, CA, February 2004.
Presentations: *Task Review for Task 1-1-B, and Status Report of FLIHY Facility*

- Jupiter II Task 1-1-B Technical Planning Meeting, Kyoto University, Kyoto, Japan, December 2003.
Presentation: *Status of FuY2003 work*
- ALPS and Plasma Facing Components Program Meeting, Oakbrook, IL, November 2003.
Presentation: *MHD Analysis of Lithium motion in DiMESTest Blanket Module Program Meeting*, UCLA, November 2003.
Presentation: *Thermofluid MHD issues for liquid breeder blankets and first walls* Combined ALPS/APEX Project Meeting, Grand Canyon, AZ, April 2003.
Presentation: *Task II Overview Report*
Presentation: *Preliminary 3d-MHD modeling efforts for new liquid lithium dimes probe with HIMAG Code*
- Third Steering Committee Meeting for Japan/US Collaborative Program JUPITER-II, ORNL, Oak Ridge, TN, February 2003.
Presentations: *Task 1-1-B Thermofluid Flow Simulation, US Perspective on Progress in FuY2002, Plans for*
- Combined ALPS/APEX Project Meeting, Princeton, NJ, November 2002.
Presentation: *Task II Progress Report and Plans for FY03*
Presentation: *MHD Analysis of Lithium Sample in DiMES/DIII-D APEX Study Meeting 20*, Electronic Meeting at UCLA, August 2002.
Presentation: *Task II Status*
- APEX Study Meeting 19, San Diego, Marriott Del Mar, CA, April 2002.
Presentation: *Task II Overview*
- APEX Study Meeting 18, Electronic Meeting at UCLA, February 2002.
Presentation: *Task II Overview- MTOR and Jupiter-2*
- Second Steering Committee Meeting for Japan/US Collaborative Program JUPITER-II, UCLA, Los Angeles, CA, January 2002, Presentation: *JUPITER-II Task 1-1-B Thermofluid Flow Simulation Progress and Accomplishments in Year 1 (FuY 2001)* APEX Study Meeting 17, Scottsdale, AZ, November 2001.
Presentation: *Task II Overview and Modeling of Flow out of Exit Pipe and LM Inclined Plan Experiments in MTOR and Task II Plans for FY02*
- APEX Study Special Meeting Electronic Meeting, UCLA, October 2001.
Presentation: *FY02 plan (1:20-1:30 Pres.-1:30-1:40 Discussion)*
- APEX Study Meeting 16, Electronic Meeting at UCLA, August 2001.
Presentation: *Task II Overview*
- APEX Study Meeting 15, UCLA, April 2001.
Presentation: *Update on Task II Activities*
- APEX Study Special Electronic Meeting, UCLA, April 2001.
Presentation: *Liquid Wall Concepts, Modelling, and Experiments (v. 4-17-01)*
- APEX Study Meeting 14, Electronic Meeting at UCLA, February & March 2001.
Presentation: *Status of Task II and Associated Experimental Facilities*
- APEX Study Meeting 13, Sandia National Laboratory, November 2000.
Presentation: *Overall Status of Task II and Plans for FY01 and FLIHY status (including design and modeling efforts for test article designs)*
- APEX Study Meeting 12, Electronic Meeting at UCLA, August 2000.
Presentation: *Liquid MHD Modeling and Experiments and Ga-flow-movie*
- APEX Study Meeting 11, Argonne National Laboratory, May 2000.
Presentation: *Overall Status of Task II Work*
- APEX Study Meeting 10, Electronic Meeting at UCLA, March 2000.
Presentation: *Status Report on Task II and progress on MHD modeling tools*
- APEX Study Meeting 9, Tokyo, Japan, February 2000.
Presentation: *Exploration of Liquid Walls*
- US-DOE/Japan-Monbusho Collaboration Workshop, Tokyo, Japan, February 2000
- APEX Study Meeting 8, UCLA, November 1999.
Presentation: *Thin Liquid Wall Concepts and CLIFF- Convective Liquid Flow First Wall (Status, R&D Issues) and Summary of Liquid Wall FY2000 Tasks) and Summary of Task II: Exploring Attractive Liquid Wall Options*
- IFE Free Surface Hydraulics Workshop, Berkeley, California, November 1999
- APEX Study Meeting 7, PPPL, May 1999.
Presentation: *Hydrodynamics and MHD Modelling for the CLIFF Concepts and Status Reports from the Principal Authors of Each Chapter and Discussion on Summary of Key Technical Issues*

- APEX Study Meeting 6, UCLA, February 1999.
Presentation: *Progress on CLIFF Concept for Advanced Tokamaks*
- APEX Study Meeting 5, UCLA, November 1998.
Presentation: *Recent Analysis and Design Implementation for the Convective Liquid Flow First Wall (CLiFF) Concept and CLIFF*
- MFE-IFE Workshop, Princeton, New Jersey, Sep. 1998
- APEX Study Meeting 4, Sandia National Laboratory, July 1998.
Presentation: *Convective Liquid Flow First Wall (CLiFF) and CFD Tools: TELLURIDE and MHD Codes and MHD Modeling*
- US-Japan Workshop on Laser-Driven Inertial Fusion Energy, San Diego, May, 1998
- APEX Study Meeting 3, UCLA, May 1998.
Presentation: *Analyses of Liquid Wall Concepts*
- Innovative Confinement Workshop, Princeton, April, 1998
- APEX Study Meeting 2, UCLA, January 1998.
Presentation: *Design Issues and Analysis of Liquid Wall Concepts Protection and Hydraulic Analysis of Liquid Surface First Walls*
- ANSYS Instructional Workshop, Huntington Beach, January, 1998
- US-Japan Workshop on High Heat Flux Components and Plasma Surface Interactions, San Francisco, Dec 1997
- APEX Study Meeting 1, UCLA, October 1997.
Presentation: *Free Liquid Surface FW and Blanket Concepts for High Power Density Reactors*
- European Lithium-Lead, Water-Cooled Blanket Workshop, Paris, France, May 1996
- Liquid Metal Divertor Workshop, Chicago IL, March 1995
- US-Japan Workshop on High Heat Flux Components, San Diego, December, 1994
- Workshop on Plasma Surface Interactions, Livermore, CA, 1994