ILASS International Council Meeting  
Aug. 24 (12:30-14:00)

Agenda of Council Meeting
1. Member introduction  
7. Report of Tanasawa Award Selection  
8. Administration Committee and Organization of ILASS-Int.  
9. Revise of Constitution and Bylaws  
10. Other items for ILASS-Int. Business  
11. ICLASS-2018  
12. Next President of ILASS-Int.(2016-2018)  
14. Others
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ILASS International Council Board Meeting
Aug. 24 (12:30-14:00)

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12. Next President of ILASS-Int. (2016-2018)
14. Others
1. At Heidelberg, President of ILASS-Int. (2013-2015, Masataka Arai) took over the official duties of ILASS-Int. from Dr. William Don Bachalo (President of ILASS-Int. 2000-2012)

2. Publisher of Atomization and Sprays (Begell House Inc.) problem is solved (Rumor/gossip of publisher, Effort of ILASS-Americas and Vicky Lipowski, vicky@begellhouse.com)

3. Illegal publishing of the proceedings of ICLASS-2009 (Begel House and Doug Tally)

4. Web-site of ILASS-Int.(2012-2015) was opened. (Prof. Tsuneaki. Ishima)

5. Arrangement of previous officers of ILASS-Int. and old records concerning ILASS-int. establishment

6. Copyright of articles in the proceedings of ICLASS-2012 (Free use for academic conditions)


8. Negotiation with ILASS-Japan and ILASS-Asia about the future organization of Administration Committee of Tanasawa Award

9. Assignment of the chairperson of Selection Committee of Tanasawa Award (ICLASS-2018).

10. Authorization of short course education program in ICLASS-2015
   The 3rd International Advanced Course on Liquid Interfaces, Drops and Sprays (LIDESP III)

11. Encouragement of paper submission to ICLASS-2015

12. Preparation of Council Meeting of ILASS-Int.
Future Progress of ICLASS (ICLASS-2006 Kyoto Japan)

New Advanced Technology of Atomization
New Advanced Technology of Spray Engineering
Molecular Level Breakup Process
New Application of Spray Technology

Natural Increase of Research Field

### Breakup Mechanism
- Droplet Deformation
- Droplet Evaporation

### Atomizer
- New Atomization Method

### Spray Combustion
- Engine Spray
- Burner Spray

### Gas Turbine
- Aerospace Engine
- Industrial Application

### Medical Application
- Aerosol
- Metal Powder
- Fine Particle
- Others

Developed Technology in Atomization and Spray Systems

Source: Masataka Arai, Round Table Discussion : Global View of Atomization and Spray Systems, ICLASS-2006, Kyoto Japan
Activities of ILASS-2015 in Tainan Taiwan

Tentative (abstract submission: 311)

Full paper presentation 254
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Our Goals

• Be recognized as the premier association and best gathering of experts in our industry

• Encourage membership and involvement from the younger generation of engineers
  • Provided $2,000 stipends to six students to attend ICLASS 2015

• Broaden participation and build alliances with other industries

• Leverage our partnerships with our Asian and European counterparts

• Strong financial stewardship – healthy treasury
2015 Board of Directors

OFFICERS

Chair, Dr. Douglas G. Talley - Air Force Research Laboratory
Vice Chair, Dr. Vincent G. McDonell - University of California, Irvine
Treasurer, Dr. Scott E. Parrish, General Motors R&D and Planning
Secretary, Mr. Charles W. Lipp - Lake Innovation, LLC

MEMBERS AT LARGE

Dr. Guillermo Aguilar, University of California, Riverside
Dr. Marcus Herrmann, Arizona State University
Dr. Milind Jog, University of Cincinnati
Dr. Corinne Lengsfeld, PhD, University of Denver
Dr. Malissa Lightfoot, Air Force Research Laboratory
Dr. Steve Lin, Taitech, Inc.
Mr. Lee Markle, Delphi Automotive

Past-Chair, Mr. Rudolf J. Schick - Spraying Systems Co.
EX-Officio, Professor Norman Chigier
• **ILASS Americas Snap Shot**
  • 1081 members, ~700 “connected”
  • 27 Conferences to date
  • Switch between, Eastern, Western, Central United States and Canada
  • Simmons (best student) and Marshall (best paper) Awards
    • Simmons award includes $1,000 stipend
27th Annual Conference of the Institute for Liquid Atomization and Spray Systems (Americas)  
17-20 May 2015, Raleigh, North Carolina

- 115 registrants, 45 new members, 28 students
- 74 technical papers
- 11 exhibitors, 21 exhibitor personnel
- 7 sponsors
• NIST funding provided to (1) develop a consortium and (2) coordinate development of an advanced technology roadmap for use throughout the entire atomization community in the US
  - ILASS-Americas playing a key leadership role
    - Scott Parrish
    - Vince McDonell
• Key stakeholders will hold highly interactive, results-oriented technology roadmapping workshops
• First workshop co-located with 2016 ILASS Americas meeting

• Establish Vision /Goals
• Conduct State of the art Assessment & Expert Interviews (Jul-Dec 2015)
• Workshop 1—May 2016 (ILASS)
• Workshop 2—June 2016 (ASM)
• Final Roadmap—January 2017
• Consortium Launch—May 2017
28th Annual Conference of the Institute for Liquid Atomization and Spray Systems (Americas)
14-18 May 2016
Dearborn, Michigan
+
1st ATIC workshop 19-20 May
ILASS International Council Meeting
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14. Others
Organization of ILASS-Asia

Officers of ILASS-Asia (2015-2016)
- President: Min Xu (Shanghai Jiao Tong University, China)
- Vice President: Ta-Hui Lin (National Cheng Kung University, Taiwan)
- Vice President: Y. B. Yoon (Seoul National University, Korea)
- Secretary: Nobuyuki Kawahara (Okayama University, Japan)
- Webmaster: Wei-Hsiang Lai (National Cheng Kung University, Taiwan)
- AAS regional editor: Soo-Young NO (Chungbuk National University, Korea)

Other Committee Members (2015-2016)
- Masatoshi Daikoku (Hachinohe Institute of Technology, Japan)
- Tsuneaki Ishima (Gumma University, Japan)
- Akira Sou (Kobe University, Japan)
- Mun Soo Chon (Korea National University of Transportation, Korea)
- Jung Goo Hong (Kyungpook National University, Korea)
- Sung Wook Park (Hanyang University, Korea)
- Liguang LI (Tongji University, China)
- David Hung (Shanghai Jiao Tong University, China)
- Wei-Hsin Chen (National Cheng Kung University, Taiwan)
- Kuo-Liang Shih (National Yun-Lin University of Sci. & Tech):
- R. V. Ravikrishna (Indian Institute of Science)
Conferences of ILASS-Asia

17th Annual Conference of ILASS-Asia in Nagasaki, Japan,
December 18-19, 2013
52 papers, 1 special lecture, 1 invited lecture

18th Annual Conference of ILASS-Asia in Shanghai, China,
October 26-29, 2014
67 papers, 1 special lecture
Report from ILASS-China (China Region)

ILASS-China: President: Prof. Zhen Huang  Secretary: Prof. Xinqi Qiao
Membership: Committee members: 20+  Regular members: 100+

Activities during the past year:
• The Fourth Engine Researchers Forum in Asia
• LaVision-Oplan-SJTU Joint Workshop on optical diagnostics for spray & combustion
• Annual Conference on Combustion in China (Spray Session)
• DME (Dimethyl Ether) injection & combustion meeting at SJTU

Plan for next year:
• Connect with other ILASS-Asia bodies
• Streamline ILASS-China organization and promote interactions among Chinese universities
• Plan activities including workshops and symposiums on sprays
ILASS-Taiwan

- 24th National Conference on Combustion and Energy
  National Cheng Kung University, Tainan, Taiwan
  April 19, 2014
  Papers related to Spray and Atomization: 30/123

- Visit of Prof. Masataka Arai, President of ILASS-International
  August 24 – September 6, 2014
  Discussion on preparations for ICLASS 2015
  Visit to universities, research institutions and engine companies

- ILASS-Taiwan
  Chairman: Prof. Ta-Hui Lin
  Vice-Chairman: Prof. Wei-Hsin Chen
Reports from Regional ILASS-ASIA
ILASS-Korea

Presidency
2014-2015: Prof. Ki Hyung Lee (Hanyang University)

Members: about 243 (including students, universities and companies)

Journal of ILASS-Korea:
Vol. 19 No. 1 (March 2014, 7 Papers)
Vol. 19 No. 2 (June 2014, 6 Papers)
Vol. 19 No. 3 (September 2014, 7 Papers)
Vol. 19 No. 4 (December 2014)
Conference
Date: September 19th, 2014
Venue: Ocean suite Hotel in Jeju Island
No. of Papers: 44 (Oral: 34 including 1 Invited Lecture, Poster: 10)
No. of Registration: 87 members

Workshop
Date: April 18th, 2014.
Venue: Welli-Hilli Park Resort in Hoengseong.
No. of papers: 3 Invited Lecture
No. of Registration: 31 members
Reports from ILASS-Japan
Activities in 2014

President: Prof. Keiya NISHIDA (Hiroshima University)
(西田 恵哉 (広島大学))

Members: 261 personals (including 24 students),
27 companies

Publication
Journal of the ILASS-Japan “BIRYUKA (微粒化)”
Vol. 23, No. 78 (March 2014)
Vol. 23, No. 79 (July 2014)
Vol. 23, No. 80 (November 2014)
Reports from ILASS-Japan
Activities in 2014

Symposium/ Seminar/ Research Committee:

• 23rd Symposium (ILASS-Japan) on Atomization
  December 18-19, 2014, Hirosaki
  40 papers, 1 special lecture, 1 invited lecture

• 10th Atomization Seminar (Course Study and Workshop)
  November 18, 2014, Tokyo

• Atomization Research Committee (微粒化研究会）
  Ÿ Next generation atomization and measurement method
  Ÿ PM emission reduction and functional particle production
  Ÿ Atomization technology survey

• Supported/Co-organized Conference
  5 Conferences
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14. Others
Chairman (2013-2016)
Prof. Oskar J. Haidn

Vice-Chairman (2013-2016)
Dr. Antonio Lozano

Secretary (2013-2019)
Prof. Manolis Gavaises

Treasurer (2013-2019)
Dr. Ing. Lucio Araneo

COMMITTEE MEMBERS

Dip. Phys. Lothar Bendig (Honorary Member)
Prof. Dr. Günter Brenn (2013–2016)
Dr. Christophe Dumouchel (2013-2016)
Prof. Morgan Heikal (2016 Conference Chairman)
Prof. Eva Gutheil (2013-2016)
Dr. Chawki Habchi (2013-2016)
Dr. Jerome Helie (2013-2016)

Prof. Antonio Cavaliere (Honorary Member)
Prof. Mark Linne (2013-2016)
Prof. Marco Marengo (European Editor A&S)
Dr. Ana Moita (Newsletter Editor)
Dr. Raffaele Ragucci
PD Dr. habil. Ilia Roisman (Web Pages Editor)
Prof. Dr. Peter Walzel (2014-2017)
Dr.-Ing. Qiaoyan Ye (2013-2016)
Activities:

- European Conference on Liquid Atomization and Spray Systems
- New Web pages (www.ilasseurope.org)
- Newsletter (2 issues/year)
- Arthur Lefebvre Award
- Paul Eisenklam Travel Award (4 awardees for ICLASS 2015)
Awards:

**Paul Eisenklam Travel Award for Young Researchers (3 to 5)**
depending on the financial situation and the location of the conference

**Arthur Lefebvre Award** for continuing and encouraging contributions to the field of atomization and sprays (tri-annual award in connection with ICLASS conferences)

- 2006 Norman Chigier
- 2009 Franz Durst
- 2012 William Bachalo
- 2015 ?
Conferences:

ILASS Europe 2013 in Chania, Greece, Sep. 1-4, 2013:
170 participants from 23 countries
Organizer: Manolis Garvaises

ILASS Europe 2014 in Bremen, Germany, Sep. 8-10, 2014:
200 participants, 130 oral presentations and 40 posters
Organizer: Udo Fritsching
Proceedings available in the ILASS-Europe webpage

ILASS Europe 2016 in Brighton, UK, Sep. 4-7, 2016:
Conference Chairman, Prof. Morgan Heikal
Scientific Committee Chairman: Prof. Sergei Sazhin
Organizing Committee Chairman: Prof. Marco Marento
Abstract submission deadline: January 15, 2016
http://www.ilass2016.org
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Make It Your First Choice

Your Community!
Your Journal!

Read, Submit, Review, Cite!
Main numbers

• Impact factor 2014: 0.781
• Incoming papers: 80 manuscripts / yr
• Rejection rate 2014: 38%
• The journal is in the Q3 of the journal of Mechanical, Chemical and Multidisciplinary Engineering
• In 2014 the time to publish increases, but it is still acceptable:
  • 7 weeks (median) for the first review
  • 3.5 months (median) for the time-to-publish
New Editor-in-Chief

• ILASS Americas has selected a new Editor-in-Chief (Editor representative for ILASS Americas):

  Prof. Marcus Herrmann
  Arizona State University

ILASS EUROPE confirms Prof. Marco Marengo (now at the University of Brighton, UK) as Editor-in-Chief for EUROPE. ILASS ASIA has a term of 10 years, i.e. Prof. No Soo Young will stay in charge likely until 2018.
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Jiro Senda – Doshisha University, JAPAN – 
Chair of the Tanasawa Award Selection Committee

< Committee Member >
Committee members are total 10, to include the chairman and 3 members nominated from each of ILASS-Americas, ILASS-Asia, and ILASS-Europe
The selection committee is closed

< Selection Procedure >
We carried out the following selection procedure based on Prof. Dumouchel guidance, who was a past chair of Tanasawa Award Selection Committee

1st Step: In advance the ICLASS 2012 Conference, we received the list of Top 20 Papers according to the reviews from Prof. Gutheil, who was a chair of ICALSS 2012 Heidelberg

2nd Step: At the conference, the session chair scored the Evaluation Form for Tanasawa Award → 8 Papers were nominated with high score above a certain point
3rd Step: Committee members recommended strongly 6 Papers through the conference presentation stage

→ finally, we had 27 Papers as candidates as no overlapping among these 20, 8 and 6 papers

4th Step: Committee have reviewed these papers with full text for 2 months as the first screening round

→ 5 Paper were selected

5th Step: Committee have evaluated again these 5 papers for 1 month as the second screening round

→ Finally we have decided the winner of 12th Tanasawa Award

< The Winner is >

ICLASS-2012 Contribution paper No. 1191

Nozzle Geometry Effects on Primary Atomization

Dr. M. Arienti
Sandia National Laboratories, Livermore, CA 94550, USA

Prof. M. Sussman
Florida State University, Tallahassee, FL 32306, USA
Nozzle Geometry Effects on Primary Atomization

M. Arienti*,
Sandia National Laboratories, Livermore, CA 94550, USA
marient@sandia.gov

M. Sussman
Florida State University, Tallahassee, FL 32306, USA
sussman@math.fsu.edu

Abstract
The increasing demand for predictive simulations of primary atomization (the complex process of spray formation right after the injection of liquid fuel) suggests pushing the inlet boundary condition upstream of the injection hole, so that effects due to the nozzle geometry can be properly included. In this work, we address the coupling between internal (with respect to the injection hole) and external flow, in relation to the spray characteristics of primary atomization. A simulation capability is presented where internal and external flow can be seamlessly calculated across the injection hole. The injection is assumed to be sub-critical, so that the external liquid-gas interface can be handled by the combined level-set volume-of-fluid (CLSVOF) method. The solid wall boundary is represented by a second level-set function \( \psi \) on the same Cartesian, block-structured grid. A grid cell belongs to the physical flow domain if \( \psi > 0 \). Cells that are near the wall boundary, but outside of the flow domain, form a narrow band of ghost cells where velocity boundary conditions are assigned. Assuming no cavitation, results from the calculation of a scaled-up, transparent, six-hole Diesel nozzle are compared to experimental observations. Flow field features appearing just before the liquid is injected are highlighted, and their impact on spray characteristics is briefly discussed.
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14. Others
Organizations of ILASS-Int. and Regional ILASS (2012-2015)

ILASS-Int.

Council of ILASS-Int.

ILASS-Europe
- EU
- UK
- Others

ILASS-Asia
- ILASS-Japan
- ILASS-Korea
- ILASS-Taiwan
- ILASS-China
- Others

ILASS-Americas
- USA
- Canada
- Others

Task Committees in ILASS-Int.
Management Entrust of Tanasawa Award business to ILASS-Japan

This is the formal request for the feasibility consideration about future management of the Tanasawa Award. Conferment of The Tanasawa Award is the one of the most important activities of ILASS-International. The Tanasawa Award Organization has consisted of two components committees. One is the Selection Committee of Tanasawa Award (SCT). Chairperson of SCT is assigned by the president of ILASS-Int. and committee members are blinded for fair selection. The other is the Administration Committee of Tanasawa Award (ACT). Main task of ACT is the management of the Award Fund and conferment business of the award. These two organization committees have directly belonged to the Council of ILASS-Int.

ACT consists of E. Prof. Nobuki Nagai and other 7 members. Membership of the committee has been limited among Professor Tanasawa's disciples and relatives. This rule has been succeeded from 1988 and all of the present members are Professor Tanasawa's disciples and relatives. However average ages of members become older and it is expected that management of ACT will become impossible at around 2020. ACT is now worried about this situation and is considering the management entrust from ILASS-Int. to ILASS-Japan. Main actions concerning this problem are as follows.

1. Nov.26, 2011 (ACT Meeting decision)
(1) Case study of 2020 was done and future situation was clarified.
(2) One of the future solutions of ACT problem was entrustment of the ACT task to ILASS-Japan.
(3) Above entrustment should be done with the agreement between ILASS-Int. and ILASS-Japan.

2. Sept.5, 2012 (Council meeting of ILASS-Int.)
Minute about the Tanasawa Award Administration
Prof Arai reminded the Board that the Tanasawa Award really has two components. First is the selection function which is carrying on as before and is being chaired by Prof Senda. However, the second component, management of the Award resources, needs consideration for the future given Prof Hiroyasu’s passing. To help facilitate this, Prof Arai proposed to allow control of the management of the Award to be brought from ILASS-Asia to within ILASS Japan. He asked for consideration of the Board regarding this idea and the Board expressed appreciation and support of the idea.

Succeeding discussions of the above meetings, I will ask to the President of ILASS Japan about the future possibility of the ACT task management by ILASS-Japan. Please consider the special position of ILASS-Japan that Late Prof. Tanasawa was one of the world foremost pioneers in the research of liquid atomization and his great achievement was done in the Tohoku University Japan. So I think that ILASS-Japan will accept the request of entrustment. If you need more explanation of the task of ACT and other concerning business, I will explain the detail in your meeting.

Sincerely

Nov.29, 2012
Masataka ARAI

ILASS-Europe
- European Conference of liquid atomization and Spray Systems
- Lefebvre Award (ILASS-Europe Award)

ILASS-Asia
- Annual Conference of liquid atomization and Spray Systems - Asia (ILASS-Asia)

ILASS-Americas
- Annual Conference of the Institute for Liquid Atomization and Spray Systems - North and South America (ILASS-Americas)

Tanasawa Award Committee
- Administration Committee of Tanasawa Award (To Be Entrusted to ILASS-Japan)
- Selection Committee of Tanasawa Award

Task Committees
- Atomization and Sprays (Entrusted to Begell House, Inc. Publishers)

A&S Editorial Board

13th International Conference of Liquid Atomization and Spray Systems (ICCLASS-2015)
Council of ILASS-Int.

ILASS-Europe
- European Conference of liquid atomization and Spray Systems
  - Lefebvre Award (ILASS-Europe Award)

ILASS-Asia
- Annual Conference of liquid atomization and Spray Systems - Asia
  - (ILASS-Asia)

ILASS-Americas
- Annual Conference of the Institute for Liquid Atomization and Spray Systems - North and South America (ILASS-Americas)

Tanasawa Award Committees
- ILASS-Japan
  - Administration Committee of Tanasawa Award
  - Selection Committee of Tanasawa Award

Atomization and Sprays (Entrusted to Begell House, Inc. Publishers)
- A&S Editorial Board

14th International Conference of Liquid Atomization and Spray Systems (IClass-2018)
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Revise of Constitution and Bylaws

(1) We need clear authorization of following items in the text of “Constitution and Bylaws of ILASS-Int.”, or don’t need? Voting member of the Council should be changed or not?
   (a) Expanded council member or expanded board member meeting
   (b) Task committees of ILASS-Int.
   (c) When above task committees are authorized, voting member should increase or not increase?

(2) Authorization of other task committees
   (a) Archive Committee of ILASS
       (History of ILASS, History of A&S, List of council members and others, etc)
   (b) others

(3) Other items that should be revised.
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Other Items for ILASS-Int. Business

1. Abbreviation and Logo-mark

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ILASS – International</td>
<td>International Council of Institutes for Liquid Atomization and Spray Systems</td>
</tr>
<tr>
<td>Revised August 18, 1997</td>
<td></td>
</tr>
</tbody>
</table>

**ARTICLE I. IDENTITY AND PURPOSE**

**SECTION 1. IDENTITY**

The International Council of Institutes for Liquid Atomization and Spray Systems (hereafter Council) is a central body to which the three regional Institutes for Liquid Atomization and Spray Systems (hereafter ILASS) belong.

**Abbreviation**

ILASS: Institute for Liquid Atomization and Spray Systems
- ILASS-Americas: Institute for Liquid Atomization and Spray Systems – Americas
- ILASS-Asia: Institute for Liquid Atomization and Spray Systems - Asia
- ILASS-Europe: Institute for Liquid Atomization and Spray Systems – Europe
- ILASS-Int.: International Council of Institutes for Liquid Atomization and Spray Systems
  - ILASS-Int. Board Meeting
  - ILASS-TGM: Triennial General Meeting of ILASS-Int.

ICLASS: International Conference of Institutes for Liquid Atomization and Spray Systems

ILASS.ORG: the Institute for Liquid Atomization and Spray Systems
Others:

**Logo**

ILASS-Int.
Regional ILASS: ILASS-Americas, ILASS-Asia, ILASS-Europe
ICLASS
Others: ILASS.ORG
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12. Next President of ILASS-Int.(2016-2018) and other officers
14. Others
ICLASS 2018

Chicago

Connecting Academia and Industry

Rudi Schick
Chicago River
Date: July 2018

Format:
- Traditional (4) day meeting / keynote each day
- (4) parallel sessions (3 days, 3 sessions on last day)
- Site visit (possible)

Rudolf J. Schick  
Vice President  
Spraying Systems Co., Wheaton, IL USA  

**Research Focus**  
- Industrial applications of sprays and spray systems solutions  
- Advancement of atomization technologies and spray characterization instrumentation and methods  

**Publications in many respected journals including**  
- Atomization and Sprays  
- Journal of Chemical Engineering  
- 50+ publication on journals and conference papers  

**Development**  
- Kyle M. Bade, Kathleen Brown, Paul Vesely, Wojciech Kalata, Geoff Tanner, and Fang Li and many others active in ILASS  
- Support and sponsorship of (3) PhD candidates and (3) masters students  

**Illass Service**  
- ILASS-Americas Board of Directors (1997-)  
- ILASS-Americas Chair (2011-2014)  
- ILASS-Americas Vice Chair (2009-2011)  
- ILASS-Americas Conference Chair, Chicago, IL (2007)
Prof. Marcus Herrmann
Associate Professor
Arizona State University, School for Engineering of Matter, Transport and Energy

Research Focus
• Computational Fluid Dynamics for multiphase flows

Publications in many respected journals including
• Annual Review of Fluid Mechanics
• Atomization and Sprays
• Journal of Computational Physics
• Journal of Fluid Mechanics

Awards
• Hendrik Casimir-Karl Ziegler Award, Royal Dutch Academy of Sciences and the North-Rhine Westphalian Academy of Sciences, 2001
• W. R. Marshall Award, ILASS - Americas, 2009
• Early Career Development Award, National Science Foundation, 2011
• Best Paper Award, 2013 ASME-Turbo Expo Conference, Combustion, Fuels & Emissions Committee, 2014

Illass Service
• Editor-in-Chief Americas for Atomization and Sprays (2015 - )
• ILASS-Americas Program Chair (2010-2011)
Prof. Olivier DesJardins
Associate Professor
Cornell University, Department of Mechanical and Aerospace Engineering

Research Focus
- Large-scale numerical modeling of turbulent reacting multiphase flows
- Use and development of LES and DNS computational techniques

Publications in many respected journals including
- Journal of Computational Physics
- International Journal of Multiphase Flow
- Journal of Fluid Mechanics
- Atomization and Sprays

Awards
- ILASS-Americas Harold C. Simmons Award for best student paper, 2014
- CAREER Award (National Science Foundation) 2014
- Distinguished Paper Award (33rd Intl. Symposium on Combustion, 2010

ILASS Service
- ILASS-Americas Program Chair (2014 -2015)
- ILASS-Americas Awards Chair (2012-2013)
## Mini-Symposiums

- Diesel Sprays
- Simulation & Validation
- Impact/Wetting
- Atomization
- Modeling
- AeroJet and Rocket Sprays
- Diagnostics
- Cluster/Multi-Port Injection
- Sheet/Swirling Sprays
- Cavitation

## Sessions

- Droplets & Turbulence
- Agricultural Sprays
- Atomization Device
- Industrial Sprays
- Spray Cleaning and Disinfectants
- Non-Newtonian/Suspensions
- Medical Sprays
- Automotive Gasoline
- Alternative Fuels
- Flashing Sprays
- Cooling Sprays
- Electrostatic Sprays
Student Center East

Front of Student Center

Outdoor Courtyard

Main Meeting Room
Spaces

- Student Center East Main Building Space
  - General Session Room (250-360 pp)
  - Two Breakout Rooms (70-150 pp)
  - Board Meeting Room
  - Registration Area
  - Exhibits

- Student Center East Tower Space (connected to main building)
  - 3rd Floor Breakout Room (200 pp)
  - 6th Floor Breakout Rooms (70-150 pp)
  - 6th Floor Speaker Ready Room
  - 7th Floor Breakout Room (70 pp)
ILASS International Council Meeting
Aug. 24 (12:30-14:00)

Agenda of Council Meeting
1. Member introduction
7. Report of Tanasawa Award Selection
8. Administration Committee and Organization of ILASS-Int.
9. Revise of Constitution and Bylaws
10. ICLASS-2018
11. Next President of ILASS-Int.(2016-2018) and other officers
13. others
Constitution and Bylaws of the International Council of Institutes for Liquid Atomization and Spray Systems

ARTICLE III. OFFICERS

SECTION 1. OFFICERS
The officers of the Council shall be a President and a Vice President/Secretary. The officers shall serve until the next meeting. New officers begin their terms upon adjournment of the meeting at which they were elected.

SECTION 2. ELECTION
The officers of the Council shall be elected from among the Representatives present at each Regular Meeting. Nominations can be made by any Representative, and serving officers may offer themselves for re-election. In making nominations, consideration should be given to maintaining the tradition of having the Presidency rotate between the various ILASS. Election will be by simple majority of those casting votes.

President of ILASS-Int. (Institute of Liquid Atomization and Spray Systems)
1988-1991: Prof. Toshio Kurabayashi (ILASS-Asia)
1995-1997: Prof. Hiroyuki Hiroyasu (ILASS-Asia)
1998-2000: Prof. Wamadeva Balachandran (ILASS-Europe)
2004-2006: Prof. Choong Won Lee (ILASS-Asia)
2007-2009: Prof. Antonio Cavaliere (ILASS-Europe)
2010-2012: Dr, William Don Bachalo (ILASS-America)
2013-2015: Prof. Masataka Arai (ILASS-Asia)

President of ILASS-Int. (2016-2018): Prof. Eva Gutheil (ILASS-Europe)
Vice President/Secretary of ILASS-Int.(2016-2018): Prof. Min Xu (ILASS-Asia)
Other Officers: ___________________________________________________________.

Next President of ILASS-Int.(2016-2018)
ILASS International Council Meeting  
Aug. 24 (12:30-14:00)  

Agenda of Council Meeting  
1. Member introduction  
7. Report of Tanasawa Award Selection  
8. Administration Committee and Organization of ILASS-Int.  
9. Revise of Constitution and Bylaws  
10. Other items for ILASS-Int. Business  
11. ICLASS-2018  
12. Next President of ILASS-Int.(2016-2018)  
14. others
The 13th International Conference on
Liquid Atomization and Spray Systems

National Cheng Kung University
Tainan, Taiwan

August 24 (Mon.) – 27(Thur.), 2015
I1 Introduction and basic concepts. Gallery of basic phenomena, micro- to macro- scale (molecular dynamics/continuum approaches), contact angle, Young equation, Laplace pressure, Free Gibbs Energy, Marangoni effects – Amirfazli

I2 Introduction to fluid mechanics of liquid interfaces. Basic equations, liquid film modeling, liquid jet break up, drop oscillations – Marengo

I3 Surface tension & measurement techniques. Equilibrium and dynamic surface tension. De Noy/Willhemy, sessile drop and pendant drop (ADSA), maximum bubble pressure. – Bertola

D1 Dynamics of drops deposited on a surface. Sessile drops, spreading law, apparent and real contact angles. Drop shedding, contact angle hysteresis – Amirfazli

D2 Introduction to drop-wall interactions. Drop impact on dry and wetted surfaces. Morphology, Shallow and thick layers. Splashing correlations. Marengo

D3 Drop impact with a solid surface. Impact regimes, impact models, drop rebound. Bertola

D4 Heat and mass transfer in drops. Drop evaporation in a flow and on a surface. Multiscale modeling approaches – Marengo


D6 Drop–drop collision. Phenomenology and collision regimes. Survey of modelling and simulation results – Marengo


NN1 Introduction to non-Newtonian fluids. Constitutive models and practical examples (polymer solutions and melts, gels, etc.). Power-law fluids, viscoplastic fluids, viscoelastic fluids. Non-Newtonian fluid design. Elements of rheological measurements. – Bertola


A2 Applications of what you learned in the course: Inkjet technology: Design of printheads, waveforms, ink formulations. Metal deposition, 3D printing, Micro lens manufacturing – Amirfazli

S1 Physics of sprays and applications. Spray formation, atomisation models. Evaporation, gas entrainment, impact. – Arai


D8 Direct Numerical Simulations (DNS) of drop dynamics. Introduction to the F3D (Free Surface 3D) code. Governing equations. Volume of Fluid (VOF) tracking method. Treatment of numerical dissipation and spurious solutions. – Lin


## Abstract Submission by Regions, ICLASS-2015

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# Full Paper Submission by Regions, ICLASS-2015

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### Reviewers

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81 Reviewers
### Final Paper Presentations by Fields

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Statistics of number of ICLASS papers

Full paper presentation 254
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<td>Plenary Lecture(I) Prof. C.K. Law Princeton University, USA</td>
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### August 24, 2015 (Monday)

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<th>B</th>
<th>Session</th>
<th>C</th>
<th>Session</th>
<th>D</th>
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<td>Turbulent Multi-phase Flow Characteristics in Gas and Liquid</td>
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<td>Control of Drop Size and Sensitivity of a Drop to High-Frequency Surface Oscillation</td>
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<td>Control of Drop Size and Sensitivity of a Drop to High-Frequency Surface Oscillation</td>
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<td>Spray Analysis of Multi-phase Flow Interaction of Spraying Suspension using High-Speed Two-Color PIV</td>
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**Notes:**
- Session A, B, C, D, and E are technical presentations and discussions related to various aspects of fluid dynamics and spray characteristics.
- Session F involves practical demonstrations and hands-on activities related to spray technology.
- Session G is dedicated to interactive workshops focusing on the application of spray technology in real-world scenarios.

**Attendees:**
- Researchers, engineers, and professionals interested in fluid dynamics, spray technology, and related fields.
- Students and academics looking to gain insights into the latest advancements in the field.

**Topics Covered:**
- Turbulent flow characteristics
- Drop size and sensitivity
- Spray analysis
- Multi-phase flow interactions
- Drop formation and growth
- Turbulent jet flow

**Key Takeaways:**
- Understanding the complexities of spray dynamics and their implications in industrial applications.
- Enhancing the knowledge base in fluid mechanics and its practical applications.
- Collaborative learning and networking opportunities among diverse international participants.

**Future Directions:**
- Further research into advanced spray technologies.
- Development of novel applications integrating spray systems.
- Integration of sustainable practices in spray engineering.
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<td>10:30 - 11:00</td>
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<td>Session Program of ICLASS-2015 3/4</td>
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<td><strong>August 26, 2015 (Wednesday)</strong></td>
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<td>10:00</td>
<td>Response of coastal air-mixed liquid jet in an acoustic field: incineration and droplet clustering</td>
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<td>11:30</td>
<td>Direct numerical simulations of surface waves on a laser-choked Prandtl jet in the near nozzle region</td>
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<tr>
<td>13:00</td>
<td>Numerical study on the detailed nonlinear dynamics of a single-mode Rayleigh-Taylor instability</td>
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<td>Time</td>
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<tr>
<td>10:30</td>
<td>11. Effect of Contact Angle on Liquid Film Behaviour in Air-Blown Assembler</td>
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<td>11:30</td>
<td>12. Effect of Low-Energy Surface Coating on Droplets Impact Dynamics on Rough Aluminum</td>
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<td>13. Development of a New Water-Addition to Grease to Cure Droplet Spreading</td>
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<td>14:30</td>
<td>14. Effect of Acoustic Forcing on Gas-Entrained Mist Coalescence</td>
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<td>15:30</td>
<td>15. Production of High-Quality Spray Nozzle and Mixture Nozzle from a New Double-Phase Injector for Gas Turbine Combustion</td>
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<td>16:30</td>
<td>16. Improvement of Hydrogen-atom Hydrochlorination Process</td>
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<tr>
<td>17:30</td>
<td>17. Natural Textualization of Textual Data Using Artificial Intelligence Methods</td>
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ILASS International Council Meeting
Aug. 24 (12:30-14:00)

Agenda of Council Meeting
1. Member introduction
7. Report of Tanasawa Award Selection
8. Administration Committee and Organization of ILASS-Int.
9. Revise of Constitution and Bylaws
10. Other items for ILASS-Int. Business
11. ICLASS-2018
12. Next President of ILASS-Int. (2016-2018)
14. Others
Prof. Miroslaw Weclas

Rawicz, 8th March 1962 –
Erlangen, 20 August 2015

Prof. Miroslaw Weclas was Professor of Combustion and Thermodynamics at the Technische Hochschule Nurnberg, Germany since 2004.

His main field of research was combustion in porous media, spray in porous systems, internal combustion engines.

He has 7 patents and more than 50 publications in conference and international scientific journals.

In 1997 he was awarded together with Prof. Franz Durst and Dr. Adrian Melling the Crompton Lanchester Prize & Medal 1997 of IMechE, London, UK