

# ISPSD Conference Guidelines

## Introduction

The International Symposium on Power Semiconductor Devices and ICs (ISPSD) has become the premier international conference for presentation and discussion of all aspects of power semiconductor device and power integrated circuit technologies. The conference has been loosely governed by an Advisory Committee (AdCom) and benefitted from great cooperation among the committees responsible for organizing each year's event. However, there have been no written guidelines to insure continuity and mutual understanding and application of the key tenets of the conference. The purpose of this document is to define and document those tenets.

## Revision History

Revision	Authors	Date	Comments
0	A. Shibib	Jun. 2012	Collected input from the advisory committee and presented in PPT format at the 2012 AdCom meeting
1	M. Mori and K. Hamada	Jan. 2013	Generated separate regulation documents for Operation, AdCom, and TPC
2	D. Disney	Mar. 2013	Combined contents of Rev. 0 and 1
2.1	D. Disney	Mar.23, 2013	Revised version of Rev. 2
3	M. Mori	Apr. 16, 2013	Comment on Rev. 2.1
3.1	D. Disney	Apr. 21, 2013	Move all comments into the main document.
3.2	M. Mori	Apr. 22, 2013	Revised version of Rev. 3.1
3.3	M. Mori	Apr. 23, 2013	Revised version of Rev. 3.2

Revision	Authors	Date	Comments
3.4	K. Hamada	Apr.24, 2013	Revised version of Rev. 3.3
3.5	D. Disney	Apr. 24, 2013	Accepted all changes into the main document.
3.6	M. Mori	May 19, 2013	Revised version of Rev. 3.5
3.7	M. Mori, K. Hamada, D. Disney	May 26, 2013	Clarified role of secretary and observer at AdCom meetings.
4.0	AdCom Members in ISPSD 2013	May 29, 2013	Revision 4.0 was authorized at AdCom Meeting in ISPSD 2013.

## **Mission**

ISPSD is a volunteer organization comprising high level members with a similar mindset of devoting themselves to the progress of technology of their field. The mission of ISPSD is to cultivate an international forum for professionals in the field of power semiconductor devices and smart power integrated circuits and related fields to meet regularly and exchange ideas and developments in the field and promote the growth of this field.

## **Sponsorship**

Sponsorship of ISPSD has traditionally been provided by IEEE Electron Devices Society (EDS) and co-sponsorship has been provided by IEEE Power Electronics Society (PELS) and IEE Japan (IEEJ) when the conference is held in North America. When the conference is held in Japan, sponsorship of ISPSD has traditionally been provided by IEEJ and co-sponsorship has been provided by EDS and PELS. When the conference is held in Europe, sponsorship of ISPSD has traditionally been provided by EDS and PELS, and co-sponsorship has been provided by European Center for Power Electronics (ECPE) and IEEJ. Sponsorship and co-sponsorship for each ISPSD are to be determined by the Organizing Committee for that year's conference.

## **Registration fees**

The registration fees for each ISPSD are to be determined by the Organizing Committee for that year's conference. The Organizing Committee should prepare budget documents in

accordance with the sponsoring society for their conference. IEEE and IEE of Japan members should receive reduced rates to promote society membership. Advance registration fees should be lower than on-site registration fees to promote early registration. Registration fees for student members should be about one half of the standard registration fee to encourage attendance and participation of students. Students should be allowed to participate in all activities of the conference including panel discussions, receptions and banquets.

## **Publications and Copyrights**

All papers accepted for presentation at ISPSD should be published in a Conference Proceedings. This includes all invited, oral, and poster presentations. The copyright of the Proceedings will be assigned to IEEJ when the conference is held in Japan, and to IEEE when the conference is held in any location outside of Japan. The IEEE should receive the ISBN Catalog Number for every Proceedings so that the Proceedings may be distributed to all libraries and other entities affiliated with IEEE.

## **Advisory Committee**

### **Purpose**

The purpose of the ISPSD Advisory Committee (AdCom) is to foster communication among the organizing committees and regions, oversee the long-term development of the conference, and ensure consistent application of the key tenets of the conference. This AdCom is the top decision making organization of the ISPSD. It is responsible for documenting and enforcing the ISPSD Conference Guidelines and for approving conference locations, General Chairs, Steering Committee Chairs, and Technical Program Committee Chairs.

### **Membership**

AdCom members are the General Chairs of prior year ISPSDs. The AdCom member list and attendance record is maintained by the AdCom Chair and approved each year by the voting members at the AdCom meeting. Each General Chair is invited to become an observer of the AdCom two years in advance of the ISPSD that they organize. An observer will have voice but no vote at AdCom meetings. After the closing of the conference that the General Chair organizes, the General Chair changes from AdCom observer to AdCom member. The Steering Committee Chair (if applicable) and the Technical Program Committee Chair of the current and next year's ISPSD are invited to attend the AdCom meeting held during the conference that

they organize, as secretaries. Secretaries will record the meeting minutes, and have no voice and no vote.

Each year, the AdCom Chair should contact each AdCom member and confirm their intention to continue serving. If an AdCom member does not attend an AdCom meeting for four consecutive years, the AdCom Chair should ask that member to resign from the AdCom.

### **AdCom Chair**

The General Chair of each conference is invited to serve as AdCom Chair for the period between the conference that they organize and the following year's conference. If this person cannot or will not serve, then the AdCom will elect an AdCom Chair from the list of AdCom members.

### **Meetings**

The AdCom will meet once per year, during the ISPSD conference. The AdCom Chair has responsibility of arranging and hosting the AdCom meeting, setting the agenda, writing and distributing meeting minutes. Any AdCom member may place items on the AdCom meeting agenda by submitting those items to the AdCom Chair in advance of the meeting. Decisions of the AdCom will be determined by a vote of the members in attendance, and a 2/3 vote of the attending members will be required in order for a measure to be approved. Approved measures will be documented in the AdCom meeting minutes and, if appropriate, in the ISPSD Conference Guidelines. The AdCom Chair has responsibility of handing over the ISPSD Conference Guidelines to the next AdCom Chair.

## **Conference Operations**

### **Frequency and Location**

ISPSD is held once per year, typically in May or June. The conference location has traditionally rotated each year among Japan, North America and Europe, in a three year cycle. In 2012, the AdCom decided to invite other countries ("open-site") to host ISPSD every fourth year, between the North America and Europe conference years. Future ISPSD conference locations and General Chairs should be proposed by AdCom and/or TPC members from the hosting region and approved by the AdCom. Criteria for approval may include historical contributions to ISPSD (i.e. number of technical papers submitted) and an assessment of the

capability of the proposed team and location to hold a successful ISPSD. The approval decision should be made at an AdCom meeting at least two years prior to the proposed open-site meeting.

For open-site meetings, the AdCom Chair of the Europe ISPSD should call for proposals from potential conference organizing committees from other countries. This call should be made within three months after Europe ISPSD meeting closure and remain open for at least six months. The call for proposals should be closed three months before the start of the Japan ISPSD. An Application Form should be provided by the ISPSD AdCom. If no proposals are received during the open period, the conference should continue its three-region rotation until the next Europe conference.

### **Chairs**

At least three years prior to the next conference in their region, AdCom members from each region will nominate candidates to serve as General Chair and Technical Committee Chair ( and Steering Chair, if desired) for the next conference in their region. These candidates will be presented to the AdCom for approval. It is recommended that General Chair candidates have served for at least three years on the TPC and for at least one year as a member of the Organizing Committee.

The General Chair of each ISPSD will have primary responsibility for management and operation of that year's conference. A Steering Committee Chair may be appointed to assist the General Chair in carrying out these responsibilities.

The Technical Program Committee (TPC) Chair will determine the membership of the Technical Program Committee, in accordance with these guidelines, and lead the TPC in the process of abstract collection, paper selection, publication, and presentation at the conference.

### **Technical Program Committee (TPC)**

The primary functions of the TPC are to solicit abstracts, review them, and select papers for publication and presentation at ISPSD.

### **Organization**

The TPC includes one TPC Chair, a Sub-committee Chair for each sub-committee, and several TPC members. The target size of the TPC is about 15% of the average conference attendance.

As of March 2013, the target membership is 60 people including the TPC Chair Sub-committee Chairs, based on an average attendance of about 400 for the past three years. The target membership number may be adjusted by the AdCom as indicated by attendance patterns and other factors.

### **Sub-committees**

The TPC comprises several sub-committees (i.e. tracks) based on technology categories. As of March 2013, the sub-committees are:

- High Voltage Power Semiconductor Devices: Medium and high voltage Si bipolar devices such as IGBT, thyristor, pn diode, etc.
- Low Voltage Power Semiconductor Devices: Low and medium voltage Si unipolar devices such as power MOSFETs, SJ type devices, etc.
- Wide Band Gap (New Material) Power Semiconductor Devices: Power Semiconductor devices based on new materials such as SiC, GaN, diamond
- Power ICs: Integrated power semiconductor devices and circuitry on a single or multi chip(s) architecture
- Module and Package Technologies: Integrated power modules and packaging technologies (functionality, power density, isolation, reliability, device cooling, temperature endurance, manufacturing, materials, etc.) which enhance power semiconductor devices functionality

As the industry and conference evolve, the AdCom should review, redefine, add, combine, and remove categories, as appropriate.

### **Responsibilities**

The TPC Chair is responsible for selection of sub-committee chairs, TPC member selection, and administration of the paper selection process. Sub-committee Chairs are responsible for assisting the TPC Chair in evaluation and selection of the papers assigned to their sub-committee.

TPC members are expected to review and score all papers assigned by the TPC Chair, and to participate in the paper selection meeting. The TPC Chair and Sub-committee Chairs may also serve as paper reviewers. TPC membership is a personal assignment. TPC members should review papers themselves, and not allow others to review papers on their behalf. Moreover, no representative will be allowed to attend the paper selection meeting on behalf of the TPC member.

### **Paper selection meeting**

The venue and schedule of the paper selection meeting will be decided by the TPC. The meeting is preferably held in early December of the year prior to the ISPSD. The venue will be decided based on convenience for all TPC members under consideration of the host region. This meeting is preferably held during some related conference or workshop, for example IEDM, of the year prior to the ISPSD meeting, in order to foster participation by all TPC members from every region. Internet-based meeting access should be arranged for those TPC members who are unable to attend the meeting.

TPC members should not score those papers written by authors from same affiliation (first authors or co-authors). During the paper selection meeting, TPC members should leave the paper selection meeting room whenever a paper by authors from their affiliation is being discussed.

TPC members have an obligation to keep confidential the contents of submitted papers.

### **Membership**

The TPC Chair should be nominated by the AdCom members from the region in which the meeting will be held, and approved by the AdCom. The Sub-committee Chairs should be appointed by the TPC Chair. The TPC Chair is responsible for selection of the TPC members for the ISPSD conference that he/she is organizing. The following are guidelines for determining the TPC membership.

1. Members of the TPC should be recognized experts in the field of the sub-committee on which they serve.
2. Industry, academia, and national labs should be represented in fair proportion to the number of contributions from the respective category.

3. Each region (Japan, North America, Europe, and Other) should be represented in fair proportion to the number of contributions from the respective region.
4. AdCom members, former General Chairs, and former TPC Chairs from each region should be consulted regarding TPC membership from their region.
5. New TPC members may be nominated by existing members of the TPC, AdCom, and/or Organizing Committee.
6. Preference should be given to candidates that exhibit the ISPSD values of open-minded thinking, high level technical ability, and good communication.
7. There should be no more than two TPC members from the same affiliation, and no more than one sub-committee member from the same affiliation.
8. Members should serve a maximum of 5 consecutive years on the TPC, and then take a break of at least 2 years before being asked to re-join the TPC. This policy will allow about 80% of existing members to serve in the following year, insuring consistency, while also allowing regular opportunities for new people to participate.
9. Each year's TPC Chair should strive to improve membership balance among the regions and sub-committees.
10. In order to maintain regional balance, the target number of TPC members on each Sub-committee should be divided among the regions. An example of the target committee membership that provides equal representation is shown below.  
Regional representation in each sub-committee could also be determined based on long-term trends in paper submission and presentation volume.

Region	HV subcom	LV subcom	IP subcom	WB subcom	PK subcom	Total TPC members
Japan	3	3	3	3	3	15
North America	3	3	3	3	3	15

Europe	3	3	3	3	3	15
Other	3	3	3	3	3	15
Total	12	12	12	12	12	60

## **Plenary Sessions**

The plenary session should consist of three invited papers, one presentation from at least three of the geographic regions of Japan, North America, and Europe. The final selection of the plenary speakers is the responsibility of the Organizing Committee. It is recommended that the Organizing Committee consult with AdCom members from each region to identify appropriate speakers from their respective regions.

## **Awards**

The Charitat Award should be awarded each year to a young researcher (age less than 30 at the time of the conference) who is both first author and presenter of a paper determined to be best overall among all eligible papers. Paper eligibility should be indicated during the abstract submission process. The Charitat award should be administered by the TPC each year and presented during the closing session of the conference. Traditionally, the Charitat award has been decided by vote in a committee comprising a subset of the TPC and including fair representation from all of the regions.

The Best Paper Award should be awarded every year to the authors of a paper determined to be the best overall by a popular vote of all TPC members in attendance at the conference. The process should be administered by the TPC Chair with a goal of announcing the winner to the TPC members during the TPC dinner or equivalent gatherings. The best paper award should be presented by this TPC Chair at the opening session of the following year's ISPSD.

The Pioneer Award should be awarded each year to an individual who is deemed to have made seminal contributions to the advancement of any of the ISPSD fields of interest. This award has traditionally been given to a person who made their most significant contributions while working in the region that is hosting that year's ISPSD. There has also been a bias toward recognizing an individual who has not yet received recognitions that are commensurate with

their contributions. Pioneer Award recipients should be determined by the Organizing Committee with input from the TPC.

The ISPSD Contributory Award may be presented occasionally for outstanding service to the conference. These awards should be administered by the AdCom. AdCom members should nominate potential awardees and the entire AdCom should vote to determine whether or not the nominees should be presented with a Contributory Award.

## AdCom attendance list

Name of ISPSD General Chair	Region	General Chair Year	AdCom Meeting in ISPSD 2013
T. Ohmi	Japan	1988, 1990	Member (not attend)
A. Shibib	North America	1991	Member (attend)
M. Okamura	Japan	1992	Member (not attend)
B.J. Baliga	North America	1993	Member (not attend)
W. Fichtner	Europe	1994	Member (not attend)
H. Ohashi	Japan	1995	Member (attend)
R. Williams	North America	1996	Member (attend)
L. Lorenz	Europe	1997	Member (not attend)
Y. Uchida	Japan	1998	Member (not attend)
A. Salama	North America	1999	Member (not attend)
Y. Sugawara	Japan	2001	Member (attend)
T. Efland	North America	2002	Member (not attend)
G. Amaratunga	Europe	2003	Member (attend)
T. Yachi	Japan	2004	Member (not attend)
D. Kinzer	North America	2005	Member (not attend)
P. Spirito	Europe	2006	Member (not attend)
M-K. Han	Korea (Other)	2007	Member (not attend)
T.P. Chow	North America	2008	Member (attend)
J. Millan	Europe	2009	Member (not attend)
Y. Seki	Japan	2010	Member (attend)
M. Darwish	North America	2011	Member (not attend)
P. Moens	Europe	2012	Member (attend)
G. Majumdar	Japan	2013	Chair (attend)
D. Disney	North America	2014	Observer (attend)
J. Sin	Hong Kong (Other)	2015	Observer (attend)
M. Mori	Japan	2013 Steering Committee Chair	Secretariat (attend)
K. Hamada	Japan	2013 Technical Program Committee Chair	Secretariat (attend)
J. Shen	North America	2014 Technical Program Committee Chair	Secretariat (attend)

Member has voice and vote.

Chair and Observer have voice but no vote.

Secretariat has no voice and no vote.