

Recent Activities in IAS-Manufacturing Systems Development and Applications Department (MSDAD)



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MSDAD is one of the four technical departments under IEEE Industry Applications Society (IAS). MSDAD consists of a Chair and a vice-Chair. Under MSDAD, there are three technical committees such as, Electrostatic Process Committee (EPC), Industrial Automation and Control Committee (IACC), and Industrial Lighting and Display Committee (ILDC). MSDAD vice-Chair is appointed after consultation among the three technical committees by the current MSDAD Chair. Generally, after two years of serving as a vice-Chair, the MSDAD vice-Chair is nominated for Chair position to be elected for two years by the IAS council vote. MSDAD Chair is a member of the IAS Executive Board. MSDAD Chair is the communication Channel between technical committees and the IAS Executive Board. MSDAD Chair collects the reports on quarterly basis from each technical committee Chair. The report generally covers information on the planning and/or report on the conference paper presentations either in ECCE, IAS annual meeting or any other places wherever the committee members annually meet; status of transactions paper publications, paper awards and any other activities such as, helping to establish IAS Chapter, IAS Student Branch, organize other IAS co-sponsored conferences, inviting plenary speakers, tutorials, etc. As approved in recent IAS executive board meeting at Tampa, USA during March 27-28, 2017, each technical department vice-Chair is responsible to involve himself/herself and/or finding volunteers within the scope to support the IAS sponsored/co-sponsored conferences in the review process and selection of the papers from the conference to review for transactions.

MSDAD established '**MSDAD Award of Merit**' in 1995 to recognize an individual whose professional or technical contributions have resulted in a significant advance in the area represented by MSDAD. In recent IAS executive board meeting the award money was increased to \$1000 from existing \$200, pending for final approval from IEE Technical Activities Board (TAB) meeting in June 2017. The composition and summary of the activities for each committee under MSDAD are presented below.

EMC:

The electrostatic process committee (EPC) has a long history and treat an important field of electrical industry applications. The scope of the EPC shall be "The treatment of matters within the scope of IAS in which emphasis or dominant factor relates to the use of electrostatic phenomena". The stated scope encompasses but is not limited to: Fundamentals (electric field computation, numerical and experimental techniques, charging, conduction, discharges, materials, surface and interface phenomena, biological effects, ...), Applications (reprographics, painting, powder coating, flocking, electro spraying, precipitation, separation, pollution control, non-thermal plasma, health effects, biotechnologies, cell manipulation, cellular interactions, micromachines, nanotechnologies...), and Hazards (electrostatic discharges, damages ignitions, explosions, charge neutralization, ...). The official website of EPC can be accessed at <http://sites.ieee.org/ias-epc/>, where it is possible to find more information related to EPC activities.

The executive members of EPC consist of chair, vice-chair, secretary, and adjunct secretary. Only for adjunct secretary position, the nomination is called. From the received nominations, one candidate is elected first by the committee and then ratified by the general members of EPC during the annual meeting. After two years of service as adjunct secretary, the candidate is moved to secretary position for two years, then to vice-chair position for the next two years, and finally to chair for two years.

EPC organize sessions every two years in IEEE IAS annual meeting. Now EPC has up to 5 technical sessions with 7 papers in each session. EPC also collaborate with ESA (Electrostatic Society of America) joint conference every two years. The conference is also authorized by IEEE Industry application society and presented papers in the conference can be submitted either to IEEE Transactions on Industry Applications or Journal of Electrostatics (Elsevier). After the paper review and if accepted, the presented paper can be published. Current (2017-2018) EPC has executive officers are: Chair- Masaaki Okubo, Vice-Chair- Maciej A. Noras, Secretary- Petru Nottingher, Adjunct Secretary- Kazuo Shimizu, Review Chair- Shesha Jayaram

IACC:

In 1993, the Applied Automation Committee merged with Industrial Control Committee to create the IACC under MSDAD. The executive members of IACC consist of chair, vice-chair, secretary and past-chair. Only for secretary position, the nomination is called. From the received nominations, one candidate is elected first by the executive

committee and then ratified by the general members of IACC during the annual meeting. In case of two or more strong nominations for the position, election may be held for voting by the general members during the annual meeting. After two years of service as secretary, the candidate is moved to vice-chair position for two years, then to chair position for the next two years and finally to past-chair for other two years. Currently, vice chair serves as the Transactions Papers Review Chair; chair serves as Technical committee chair for IAS annual meeting and past-chair serves as a nominating committee chair. The annual meeting of IACC happens during the IAS annual meeting. IACC has around 60 general members around the world and usually 30-40 people attend the annual meeting. IACC hosts a conference once a year in IEEE IAS annual meeting. The usual acceptance rate for the conference paper is around 60%. Now the IACC has up to 8 technical sessions with 7 papers in each session. Among the conference papers presented at the IAS annual meeting, IACC selects three best papers for prize paper awards.

The scope of the IACC shall be the treatment of all matters within the scope of IAS in which the emphasis or dominant factor specifically relates to manufacturing and factory automation, including the application of industrial electrical and electronic devices, systems and methods to the conversion, regulation and utilization of electricity for the control of industrial processes, machinery and heating. Included are applications of transducers, sensors, power electronics, motor control, drive systems, programmable logic controllers, distributed control systems, computers, robotic, vision system and control systems software to machines and manufacturing processes. More detail about IACC can be found in the website, <https://sites.google.com/site/iaccmeetings/>. Current (2016-2017) IACC executive officers are: Chair- Babak Nahid-Mobarakeh (France), Vice Chair- Akshay Kumar Rathore (Canada), Secretary - Sukumar Kamalasadana (USA), past-Chair- Abdul Ofoli (USA).

ILDC:

The Industrial Lighting and Displays Committee ILDC is one of the oldest committees in the IEEE, being over 100 years old and a seed committee for the IEEE Industry Applications Society (IAS). This committee has evolved in name and purpose as lighting technology and its requirements have changed over the years, but it has managed the presentation and publication of lighting contributions since its formation to the present day. Read more about ILDC here. Current (2017-2018) ILDC executive officers are: Chair- Marcos Alonso; Vice-Chair- Marco Dalla Costa, Secretary- Kazutake Uehira, Papers Review Chair- Francis Dawson.

ILDC usually meets at the IAS Annual Meeting. The official website of ILDC can be accessed at <https://sites.google.com/site/iasildc/>, where it is possible to find more information related to ILDC activities. Recently, a LinkedIn group has been open under the name IEEE IAS Industrial Lighting and Displays. Everyone is invited to join this group and collaborate with the ILDC activities. ILDC develops many activities as for example the organization of sessions and tutorials at the IAS Annual Meeting. All ILDC papers presented at the annual meeting sessions are eligible to receive one of the 3 prestigious ILDC prize papers, which are evaluated by the ILDC award committee. The prizes include a certificate and a monetary award. ILDC also collaborates in the organization of special sessions in many other conferences along the world, as ECCE, IECON, and others, usually in coordination with IAS sister societies. ILDC also collaborates in several standards committees in Europe, America and Asia.

Papers published in the IAS Annual Meeting and other IAS sponsored conferences are eligible to be published in the IEEE Transaction on Industry Applications (2015 JCR Impact Factor, 1.901). The attraction of young engineers to ILDC is another important action within the committee. In this regard, ILDC has actively participated in the creation of several Student Branches and Student Branch Chapters, such as recently those in Federal University of Santa Maria in Brazil, University of Oviedo in Spain and Federal University of Juiz de Fora in Brazil. If you are interested in collaborating with ILDC, please contact ILDC Chair, Marcos Alonso at marcos@ieee.org, or join our LinkedIn group and let us know about you!