

Introduction what is IES Student and Young Professionals Activity Committee (S&YPA) .

IES Student and Young Professionals Activity Committee (S&YPA) is a team devoted to support the most active students all over the world. We are doing our best to attract students to our Society. S&YPA support selected conference publications authored or co-authored by IES Students (travel cost reimbursement up to 2kUSD). This committee organize in co-operation with main IES conferences ISIE and IECON scientific forums, tutorials, industry link, and social events especially for students. S&YPA select and promote the best student presentations during the forum by prestige awards up to 750 USD. To learn more details about above mentioned activities, profits please read the message below.

Just to clarify who is Student and Young Professionals member let us explain this briefly. In the IEEE we have a **Student/Graduate Student Membership**. "Student member must carry at least 50% of a normal full-time academic program as a registered undergraduate or graduate student in a regular course of study in IEEE designated fields. The total cumulative period for a member to hold the Student member grade and/or the Graduate Student member grade is limited to eight years" [1].

Do not worry if you have finished your study and received your first professional degree. In this case you can become a **Young Professionals** (YPs) IEEE member automatically up to 15 years after your graduation. Moreover, YPs need the help of more experienced professionals to network with and mentor Young Professionals [2]. So, IES members are always young in hearts and tried to cooperate all together.

Student and Young Professionals Activity Committee News.

Since last IECON'15 in Yokohama IES Student Paper Travel Awards (IES SPTA) are distributing between Students in our Society. In March 2016 at ICIT first time 6 awarded students: Yuchen Jiang, Harbin Institute of Technology, China for paper entitled "Study on recent developments of residual generation design approach based on available process measurements; Apparao Dekka, Ryerson University, Canada, for paper entitled: "Dual-Stage Model Predictive Control of Modular Multilevel Converter"; Shambhu Sau, Indian Institute of Technology, Bombay, India, for paper entitled "High-Power Regenerative Cascaded Multicell Converter with Multilevel Input and Output"; Jinya Su, Loughborough University, United Kingdom, for paper entitled "Fault Diagnosis for Vehicle Lateral Dynamics with Robust Threshold"; Hyuntae Choi, The University of New South Wales, Australia, for paper entitled "Hybrid Energy Storage for Large PV Systems using Bidirectional High-Gain Converters"; and last but not least Umesh B S, Indian Institute of Technology, Hyderabad, India, for paper entitled "Generation of Multilevel Voltage Profile for Torque Ripple Reduction of a 15 Phase Pole-Phase Modulated Induction Motor Drive Using Two-level Inverter Structure" prepared and presented three minute speech (3Ms) with movie in background to present their project during the conference and in IES Facebook page under ICIT2016 event the link is placed in references [3].

In this year we are going to support by IES SPTA also another conferences namely: ISIE, INDIN, ETFA, CPE-POWERENG, IECON and PEMC (as a memorial of prof. Istvan Nagy).

Attraction and benefits for Students and YPs

S&YPA is continuously working on the offer for students and their supervisors introducing travel reimbursement and scientific and social events. Main activities are described below.

IES Student Paper Travel Award Program (IES SPTA)

The Student and Young Professionals Activity Committee of the Industrial Electronics Society (IES) offers financial support to the IEEE IES Student members to attend IES conferences. We have allocated **35 IES Student Paper Travel Awards (IES SPTA) up to \$2000 each** for the following conferences (Tab.1) in the year 2016. It should be pointed that in the case of a large number of applicants having obtained a high score, the committee can reduce the Award amount to 1.0kUSD per Applicant. This exceptional measure is meant to support the travel of the high number of excellent applicants. From the other hand the number of IES SPTA for IECON could be increased upon needs and budget capability.

Tab. 1 Planned 35 IES Student Paper Travel Awards (IES SPTA) up to \$2000 each for the following conferences

Planned IES SPTA	Conference	Website
6	ICIT, Taipei, Taiwan, March 14-17, 2016	http://www.icit2016.org/
9	ISIE, Santa Clara, CA, USA, June 8-10, 2016,	http://isie2016.org/
2	CPE-POWERENG, Bydgoszcz, Poland, Jun 29 - July 01, 2016	http://www.cpe-powereng2016.utp.edu.pl/
4	INDIN, Poitiers, France, July 18-20, 2016	http://ieee-indin2016.sciencesconf.org/
4	ETFA, Berlin, Germany, September 6-9, 2016	http://etfa2016.org/
2	PEMC, Varna, Bulgaria, September 25 - 30, 2016	http://www.ieee-pemc2016.org/
8	IECON, Florence, Italy, October 23-27, 2016,	http://www.iecon2016.org/

Who can apply ? :

- ✓ be an active IEEE IES Student Member,
- ✓ reside outside the city in which the conference is held,
- ✓ have a paper accepted at the conference and be the person who will present it.

The IES Conference Submission System will show the button to apply for the travel award only if at least one author has student checkbox checked and only after the final version of the manuscript is already submitted. A paper cannot be awarded more than one travel award. A person cannot receive more than one travel award each year. Students interested in the IES Student Paper Travel Awards Program should fill up the application available in the conference page submission system and follows all steps indicated in the form. They should clearly indicate their IEEE membership number and their paper reference number. All material should be submitted in PDF format by the form in the manuscript submission system. Travel Award applications submitted by students will be evaluated by a Committee constituted by the Chair of The Student and Young Professionals Activity Committee, IES President, Conference General Chair, and IES Treasurer.

In case the number of applicants exceeds the budget, preference will be given to:

- ✓ students with the best-qualified papers according with the reviews of each conference,
- ✓ students who have not benefited from this program in the last two years,
- ✓ **in the case of ISIE and IECON students from Student & Young Professionals Forum (IES-SF) have a priority.**

Deadlines to apply for awards under the IES Student Paper Travel Award Program are as manuscript acceptance date plus circa two weeks. To summary some important notes should be done.

- ✓ The diplomas for the IES Student Paper Travel Awards will be awarded during the conference.

- ✓ The following documents should be filled and sent to IES Treasurer: please follow the Expense Reimbursement Procedures at the IEEE IES website [4].
- ✓ The three minute speech (3Ms)+ movie and project hardware demonstration during the conference is mandatory to receive the IES SPTA. See more details how to prepare three minute speech+ movie for your project in next section.

Student and Young Professionals Forum

What is the Student Forum? The Industrial Electronics Society Student and Young Professionals Forum (IES-SF) is a great opportunity for engineering students and recently graduated engineers to present their research work on Industrial Electronics and related areas. The IES-SF is an activity specially thought for Students and Young Professionals (YPs) and its aim is to get in touch with many international students and those recently graduated from universities and companies.

What benefits do I get from the IES-SF?

- ✓ **A \$ 150 reduced registration fee for young engineers presenting their works in the IES-SF.**
- ✓ Young Engineers' Oral Session, Young Engineers' Poster Session, and three minute speech (3Ms) to present your research projects and results.
- ✓ Awards for the best presentations.
- ✓ Special tutorials conducted by distinguished world-class young lecturers (see more in the next section).
- ✓ Young engineers' welcome party and banquet (see more in the next section).
- ✓ Friendly debates with young colleagues and companies about topics directly related to your professional future.
- ✓ An extended deadline - much longer than for regular conference sessions.

May I join? Students registered in engineering courses (BSc and MSc) and also recently graduated engineers (max two years since graduation) and YPs are strongly encouraged to join the IES-SF. There are two ways to participate in the IES-SF:

Presenting original results from their research works in the Young Engineers' Oral Session and/or presenting contents and goals of their research project in the Young Engineers Poster Session. It should be noted: students that won IES-SPTA have to present their projects additionally within 3Ms with three minute movie about the project in background (see more information in next section).

Topics are not limited but they should match with the scope of the IES conference hosting the IES-SF. **It is worth to point out that only students can be authors (if reduced fee is required) papers co-authored by PhD and/or Prof. has to pay full registration fee. Professors are allowed appearing as co-authors only when regular fee will be paid.**

Students participating in the IES-SF will enjoy a **reduced registration fee**. Students' activities will be concentrated in only one day to reduce the overall cost of attending the IES-SPTA. However, students are allowed to attend most of the activities (technical sessions and tutorials) of the IES conference hosting the IES-SF. Students with a regular registration for the conference will have a free registration for the IES-SF as well.

How can I participate in the IES-SF? Authors should submit a copy of their full paper, in English, with 6 pages maximum, using automated web-based submission system and selecting **Student Forum [SF]** as technical track. Authors should specify in their submitted draft

manuscript if they would like to participate either in one of the two young engineers' oral sessions or in the young engineers' poster session. Please, consult the official symposium website or contact the IES-SF general chairman for further information.

Did you talk about awards? **Yes!!** An international group of reviewers will select the best presentations of the IES-SF based on the quality of the submitted paper, the clarity of the presentation and the interest aroused among the audience. Authors of these works will receive an IEEE supporting diploma in recognition of the quality of their contributions and a **\$ 750 award per work**. It should be noted that IES-SF awards diplomas will be presented during conference but the money will be paid when recipient submit to IES Treasurer U.S. tax form W-8 or W-9 and choose the form of payment: cheque or wire transfer.

Any suggestion to achieve an awarded paper? The IES-SF offers you a great opportunity for showing to the IES community your work and results. However, you should take into account some suggestions when you prepare your presentations in order to be successful with this task. Please, remember that:

Oral presentations

- ✓ Avoid using more than 6 lines of text and minimize the number of words on each visual effect.
- ✓ Plots should have a maximum of three data traces.
- ✓ A fast presentation is one slide per minute. A more relaxed pace would be two minutes per slide. Adjust the number of slides (12 to 15 main slides max). Remember you have only 15 minutes for the presentation and five minutes to answer all questions.
- ✓ Simple is better, avoid a lot of unnecessary formatting. We are interested in your technical content, not your PowerPoint skills.
- ✓ Put your company or university logo on your title slide only; this is a technical presentation to your peers, not a marketing pitch to a customer.
- ✓ Computer presentation works well when using dark background with light text and color scheme. Avoid flashy Christmas light multiple colors and other distracting means.

Poster presentations

- ✓ In the Young Engineers' Poster Session, young engineers will have the opportunity to show their works to experienced engineers and companies in a friendly way.
- ✓ Authors are expected to set up their Posters before the poster session beginning commences. More details will be given in the final program of the conference.
- ✓ Poster presentations are a different style of conference activity; you are advised to take the time to prepare your material well. Please note that you cannot just pin up copies of your published paper since it is not allowed.
- ✓ A good poster display will catch the eye of the viewer, present logical sequence of material in a visually appealing way, and not require the reader to examine large tracts of detailed text.
- ✓ The concept of the young engineers' poster session is that students remain at or near their paper, and engage in direct discussion with experienced engineers as they come past. This type of presentation allows for more in depth discussion with the audience, and provides the opportunity for extended interaction where there is a mutual interest. However, it only works if Authors are available for discussion so please don't just hang your poster and walk away. Keep these ideas in mind when preparing your Poster.

Three minute speech (3Ms)+ movie

Your 3Ms speech should be clear and attractive. You have to prepare also a movie and place link to the movie on YouTube and IEEE IES Facebook. During the conference you will present live your 3Ms with the movie in background. The movie has to be accessible by the Internet so remember to mention some following points when you are preparing this form of your project presentation:

- ✓ At the beginning Author should introduce himself and his University and IEEE IES (please use university and IEEE IES logos) give the title: "Of your paper " and authors list- add two or three sentences it could be as a subtitles.
- ✓ Than video should present Authors laboratory setup (if not applicable please present the main theory basic and how the methodology was selected and software, etc.), simulation model, wave-forms, and something related directly with your subject what is exiting to you in your research.
- ✓ According to voice: please consider that some voice from your test bench, applications would also be interesting - if exists. You can add some music or just narration with subtitles.
- ✓ Remember that your speech during the conference (probably just before the IES SPTA awards ceremony will be live with background of your movie (all details according to when and where will be provided by Chairs of the conference).
- ✓ The video should be available on YouTube, and Researchgate before and after conference. The deadline will be provided after IES SPTA competition results announcement.
- ✓ Please remember that the most important thing is: show hardware photos, movies if you have also hardware solution. Operating laboratory setup showing some action (movement, lighting etc.) should be shown in the video.
- ✓ Show the design process such as designing the electronics board, soldering the parts, wiring. If you do not have a hardware please do this with your software tools how your model looks like, waveforms, animations etc..
- ✓ Put some examples showing applications and impact of your work at the market, science etc.
- ✓ Your video clip should looks like e.g. attractive announcement of new product on YouTube - just search some to get the idea how to advertise in an appealing way.
- ✓ At the end you would put thanks to IEEE IES and S&YPA - give the links to your website, IES Facebook, LinkedIn, IES Student website, your University website, acknowledgment, etc.

All recipients of IES SPTA have to prepare 3Ms+ movie and declare his availability during the conference.

Student tutorial and industry link

In some cases special student tutorials conducted by distinguished world-class young lecturers will be given. With the tutorial connection IES SYPA committee invite young engineers from industry to assure a link between students and YPs from academia and industry.

What about the welcome party and banquet?

The IES-SF starts with a welcome session. This is a great opportunity to meet old (young) colleagues coming to the conference from all around the world. Conference Chairs and IES SYPA, will take advantage of this opportunity to give you a warm welcome to the IES-SF. Moreover, we will provide all the information you need about young engineer sessions and social activities available through the IES-SF.

After a long day of presentations and questions, IES will hold a students' party to close the IES-SF. This will be a buffet with light refreshments and drinks. A relaxed and informal time to

discuss the conference, establish new contacts, and make appointments for the next IEEE IES conferences.

Usually, an awards ceremony is held during the buffet. The best presentation awards and IES SPTA are presented by the IES President during this ceremony. Tickets for the students' party are included in the IES-SF registration fee and in regular registration therefore all students from the conference are welcome to enjoy a time of scientific relax with their colleagues and IES Officers.

Student Branch and Student Branch Technical Chapter

Student Branches provide IEEE Student members the opportunity to meet and learn from fellow students, as well as faculty members and professionals in the field. An active IEEE Student Branch can be one of the most positive elements in a department, offering programs in IEEE designated fields of Engineering, Computer Science and Information Technology, as well as similarly related fields of interest.

A Technical Chapter at your Student Branch is your local link to the valuable resources available from IEEE and its many Societies and Councils. The Student Branch Technical Chapter petition form includes complete directions and a workflow document of the Student Branch Technical Chapter petition processing activity can be found at [5]. Then, please form IES Student Branch Technical Chapter. For more information please visit IEEE IES website.

IES Student and Young Professionals Activity Committee (S&YPA) reports

To learn more about records of our activity please visit IEEE IES website with our annual reports at [6]. Recent data you can find below in Fig.1-3 where record of distributed scholarships since 2000 and IES Student Paper Travel Awards (since 2015, IECON'15); Distributed support for IES Students in 2015 (IES SPTA); and weighted total average of IES Student Paper Travel Awards (IES SPTA) papers in 2015 are shown respectively.

Year	ISIE	IECON	INDIN	ICIT	ICM	ETFA	DEST	POWERENG	Optim	TOTAL
2000	6									6
2001	2	18								20
2002	9	11								20
2003	7	12	1	2						22
2004	10	9		2	2					23
2005	9	10	2	3	1					25
2006	8	13	2	5	1					29
2007	10	11	2			2	2			27
2008	9	14	2	3		2	1			31
2009	8	11	1	7		2				29
2010	9	11	2	7		2	2			33
2011	6	11	2	3		2	2	2		26
2012	6	15	2	2		2	2			29
2013	8	20	2	2		2	2			36
2014	10	15	4			4				33
2015	11	20	7	14		6			2	58
2016										
TOTAL	128	201	29	50	4	24	11	2	2	447

Fig. 1 Record of distributed scholarships since 2000 and IES Student Paper Travel Awards (since 2015, IECON'15)

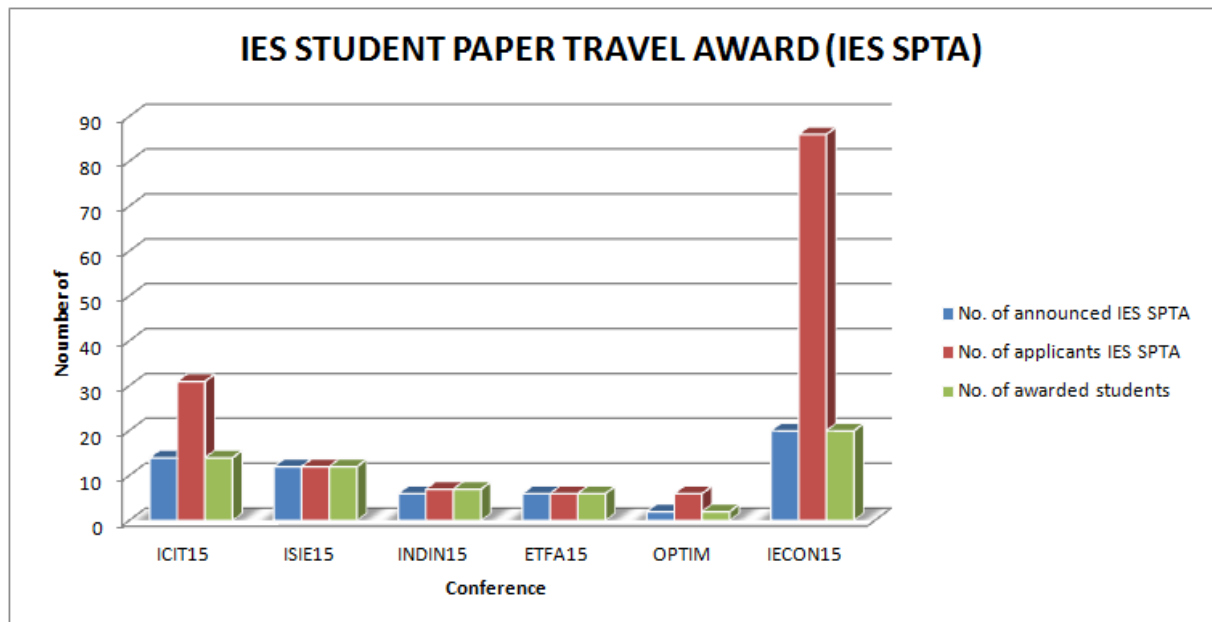


Fig. 2 Distributed support for students in 2015 (IES SPTA)

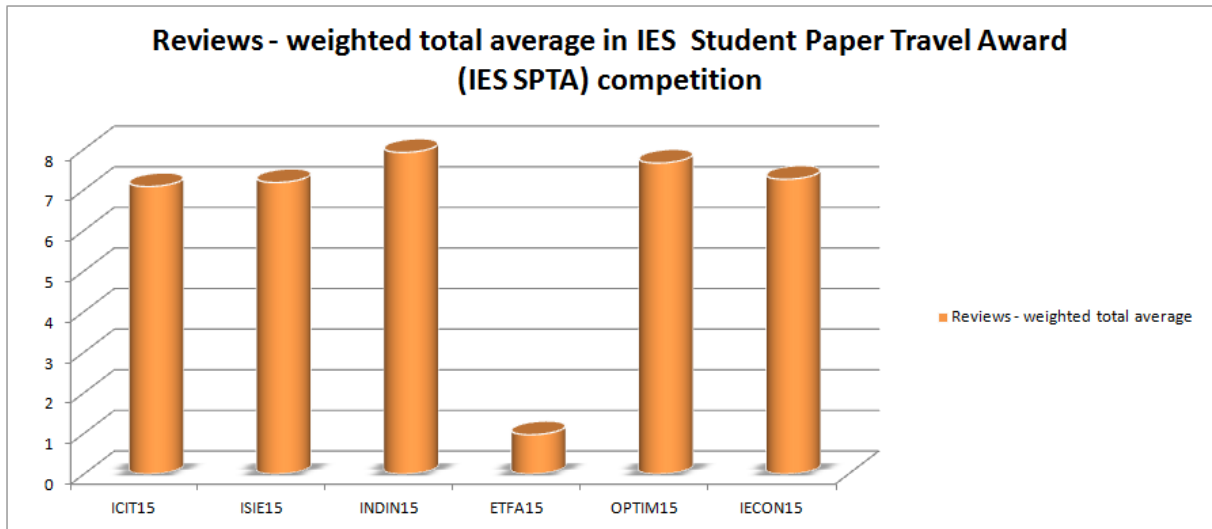


Fig. 3 Weighted total average of IES Student Paper Travel Awards (IES SPTA) papers in 2015; * ETFA15 – different submission system and different scale of review

S&YPA team and functionality

The Student and Young Professionals Activity Committee is constituted by: Marek Jasinski - Chair Student and YPs Activity Committee; Samir Kouro - Student Forum; Marek Turzynski - YPs Members activities, Cooperation with Web and Information Committee; Dimitri Vinnikov - Students Banquet, and Students Tutorial; Hani Vahedi - S&YPA e-promotion and exhibition, co- Chair of three minutes speeches (3Ms).

Moreover, S&YPA can manage all above threads thanks to the valuable support from Web & Information Committee, [7] and IES President, IES Treasurer, IES conferences.

Summarizing please become IES student member and help us to promote the knowledge. We are looking for new volunteers. "In you there is hope, for you belong to the future, just as the future belongs to you. For hope is always linked to the future; it is the expectation of "future good things"[8].

Marek Jasinski

IES Student and Young Professionals Activity Committee (S&YPA) Chair

References

1. http://www.ieee.org/membership_services/membership/join/index.html
2. <https://www.linkedin.com/company/ieee-young-professionals>
3. <https://www.facebook.com/events/1835441829929519/>
4. <http://www.ieee-ies.org/about/treasurer-information>
5. http://www.ieee.org/societies_communities/geo_activities/forms_petitions/forms_petitions_index.html
6. <http://www.ieee-ies.org/students/reports>
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8. prof. Karol Wojtyła