

Italy Section

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List the activities carried out to foster relations with Industry and the results obtained. List the initiatives planned during the next 6 months and their expected outcomes. How can the Region help your Section in your industry-related activities?

- The Industry Relation Committee works to establish direct dialogue with industry firms, to facilitate engagement of industry firms in IEEE initiatives, to increase the number of industrial companies participating in the R8 Programs (Mentor and Internship) and Italy Sections Programs (forum, panels, workshops, job fairs, awards, Student Branch initiatives, special meetings).
- In 2020, the Italy Section assigned the "Industrial Distinguished Lecturer Award" to Dr. Enrico Maria Carlini from Terna Rete Italia SpA with the lecture "Terna's strategy and best practices to operate the Italian power system with a high share of renewables". Lecturers are already scheduled for 2020. Invitations are advanced by several SBs and Chapters. This still confirms the interest and the importance of this activity to enforce the dialogue with industry, especially for our students and YP.
- On June 16-18, 2020, the R8 flagship conference IEEE MELECON was held in Palermo (<http://melecon2020.org/>). The program was structured through several technical and scientific sessions and a series of side events aimed at enforcing and increasing the dialogue among the industry, the academia, and the students.
- The Entrepreneurship Committee has the aim of analyzing the Italian Entrepreneurship scenario, promoting events in collaboration with the world of entrepreneurship and developing agreements with startup incubators, accelerators, venture capital, collaborating with R8 and IEEE Entrepreneurship. During MELECON 2020, the committee promoted two successful special events for startups and entrepreneurs: "Best Entrepreneurship Activity Pitch Presentation" - a video competition devoted to entrepreneurs to illustrate their innovative and successful entrepreneurship idea with a 5-minute video; "Special meeting on innovative startups and entrepreneurs" - a special meeting structured in two panels dedicated to entrepreneurship financial and institutional supports and to some examples of successful startups. The second event was scheduled as a plenary session of the conference to be held in live streaming.
- The WIE AG promoted a very interesting event with the participation as speakers by women having a leading position in different big companies. The event was very successful and stimulating. The title was "The Vision of Industry on Digital Evolution in Her Words" with the participation of the invited speakers: Renata Mele, Head of Smart city ecosystem development- Global e-City - Enel X; Daniela Scaramuccia, Director, Industry LTS Business Development - IBM Italy; Silvia Civardi, CEO Fresenius Medical Care Italy; Debora Stefani, Head of Optic Fiber Program, Enel Global Infrastructure and Networks; Roberto Saracco, IEEE Future Direction Board. The activity of the WIE AG is strongly increasing during these last year. As a virtuous process, the interaction and joint-actions with Chapters and other AGs are increasing.
- Finally, in 2020 several awards have been assigned to students in conjunction with the industry. In particular, awards for Master and PhD students were promoted by the Section with the contribution of ABB "Award on New Challenges for Energy and Industry 2020", (<https://italy.ieeer8.org/awards/>). The established links and collaboration with big companies such as ABB, TERNA, STMicroelectronics, ITALCERTIFER of the Italian Railways Group, Leonardo, ENEL, IBM, FRESENIUS Medical Care, are very important and consolidated. This is an important basis to go ahead involving novel big companies as well as small and medium enterprises.

List the activities addressed to Students and/or Young Professionals and the results obtained. List the initiatives planned during the next 6 months and their expected outcomes. How can the Region help in your students and YP-related activities?

Through the Student Activities and Educational Committee, coordinated by Prof. Paolo Maresca, the Section is carrying on an important effort aimed at supporting, and therefore increasing, the SBs activities. In particular, we are trying to help them to establish and enforce their network with other SBs as well as with YP AG and Chapters. In particular, we are trying to involve past-chairs of SBs in a working group of the Italy Section YP AG, with the aims of increasing the cross-activities between SBs and the YP AG, giving major continuity to the contribution of our young members, and increasing also the activities of the YP AG.

The Italy Section is proud to have supported and encouraged the formation of a very active YP Affinity Group. Recently, four new officers were elected and, together with them, 20 members distributed over the Italian territory have been recruited. In order to exploit their network and stimulating their activity, we promoted a series of meetings with other representative officers by the Italy Section as well as a meeting with the History Committee and the Industry Committee. In particular, we strongly promoted the interaction and exchange between the YP AG and the SBs. Also, practically all the 20 active YPs are distributed in the various committees of the Section, even just to be informed by the committee activities and to share the relevant initiatives to the YP AG group and vice-versa.

In collaboration with Industry, the Section grants various awards for MSc degree and for PhD degree students. This year, ABB granted the awards for 2020, and we are confident to receive other contributions from Industry in favor of our IEEE Student Members.

During the international conference MELECON 2020, the Section organized the "1st Research Activity Pitch Presentation of PhD Students and Young Professionals" where the competitors prepared a 5-minutes video: "My research in 5 minutes" in which they presented their research activity using slides, pictures, photos, graphics, lab demo, etc., to describe, in the most convincing and attractive way, their research results and field of application. The same conference presented 5 tutorials, totally open to the public, for attracting students and YPs and let them know the activities of IEEE and of the Italy Section. On the 6th October 2020, we celebrated the IEEE Day by a virtual meeting. The event was organized and promoted in conjunction with

the IEEE Switzerland Section. Two sessions were promoted: 1) "The microchip revolution" organized by the LMs AG of the two Sessions with the participation of the invited speakers Luc-Olivier Bauer and Marshall Wilder authors of the book "The Microchip Revolution: A brief history Students" and Bruno Murari of STMicroelectronics; 2) "My research in 5 minutes" with an award for the best presentation organized by the SBs and YP AG coordinators to which Students and YPs could participate sending a pitch of their research and answering to possible questions by the audience. The event was very successful and LMs and Students and YPs were together to celebrate this important date facing the older and younger generation of IEEE.

The Section also supported the organization of Student Hackathon involving several IEEE Italy Section Chapters and SBs to further encourage idea exchange, collaboration and birth of new solutions among the participant students. A student Hackathon was organized during the conference Metrology for Industry 4.0, 3-5 June 2020. The Hackathon was held on June 4-5, 2020: <http://www.metroind40iot.org/metroind2020/ieee-student-hackathon>

To increase the number of students that maintain the IEEE membership after last graduation (usually Master or PhD) a special discount for YP membership should be discussed. Helping Students and YP to increase their networking is one of the main aims of the IEEE Italy Sections. Help Students and YP to enter in contact with industrial companies is important. Support in such directions by R8 would be welcome.

List the activities carried out to retain and recruit members and the results obtained. List the initiatives planned during the next 6 months and their expected outcomes. How can the Region help in your membership-related activities?

The number of activities by the Student Branches registered an increasing trend. SBs play a very important role to attract new Student Members. The Section promotes and supports their initiatives as well as their interaction with the Young Professionals. The interaction with the restructured YP AG strongly works and appears to be a very virtuous process.

Students and graduate students are around one thousand members in the IEEE Italy Section, representing an important basis for establishing contact with the new generations.

The Section generally promotes four awards for the SBs. This year, the SB of Politecnico of Turin was awarded with the "Exemplary SB 2020", the SB of University Campus Biomedico of Rome was awarded with the "Most improved SB 2020", and the SB of University of Brescia was awarded with the "Most increased SB 2020". Other important awards for students are promoted by the industry, as well as by Societies through the joint action with the Chapters of the Section.

An annual meeting of SBs and YP AG is generally held during the annual flagship event of the Section IEEE RTSI. This year, also as a consequence of the COVID emergency, the Section promotes a series of events involving SBs and YPs in collaboration with the History Committee, as well as with the Industry Committee, which is scheduled in mid-autumn. Such meetings have the purpose to face our younger generation with the experience of the Life Members and with the world of Industry.

The Section is fully supporting the Membership Development Committee to form a working group to better diffuse the knowledge of the possibility offered by joining IEEE. This in order to enforce the number of volunteers dedicated to this key activity.

IEEE is also advertised during the many conferences (at the reception desk and in a special corner dedicated to IEEE, gadgets and other support material of IEEE was distributed). In particular, this is done to all the events organized by the Section. Italy is at first place in terms of the number of IEEE conferences and this represents a strong point by the Italy Section. Due to this particular situation, we interact with IEEE to receive every Monday an update of the conferences scheduled in Italy in order to possibly better choose possible dates or locations of future events.

R8 could help the Section in providing information, material or gadgets.

List the activities intended to support chapters, affinity groups, and student branches and the results obtained. List the related initiatives planned during the next 6 months and their expected outcomes. How can the Region help in your support to chapters, affinity groups, and student branches?

Chapter activities are well organized. The Chapters receive financial support from the Section for their technical activities. Currently, we have 40 Chapters. The interaction among Chapters is increasing also through the formed basis of YPs presented in the previous points.

IEEE Italy Section WIE Affinity Group is still fast increasing its activity. This thanks also thanks to the financial support by the Section and to the cooperation with other Italian Association and Industrial firms having the same purposes. The meeting agenda proposed by the WIE for 2020 is very rich and it can be visited directly at <https://site.ieee.org/italy-wie/>

LM AG is active and each year has an annual meeting. This year we had a joint action by the LM and History Committee in conjunction with the colleagues of the Switzerland Section. There was a meeting between the LM and History Committee and the Students and YPs.

The History Activity Committee is working very well. As a consequence of COVID, Milestone celebrations scheduled for 2020 have been postponed to the very beginning of 2021. The Milestone program for 2021 is very rich: 1) Milestone for the research contribution of Galileo Ferraris together with the Politecnico of Turin; 2) Milestone for the research contribution relevant to the Gravity Wave Antenna with VIRGO in conjunction with the LIGO projects of the USA; 3) Milestone for the research contribution of Giovanni Giorgi together with the University of Roma La Sapienza; 4) Milestone for the research contribution relevant to STMicroelectronics - Multiple Silicon Technologies on a Chip.

Milestone 1 and 3 are scheduled at the very beginning of 2021. In particular, for Milestone 3 a unique virtual global event is planned, involving the three laboratories in Italy and the USA, which can represent a very great occasion for the whole IEEE.

The Section has a very rich Section Award Program (<https://italy.ieeer8.org/awards/>): The Honorary Award 2020 has been assigned to Federico Capasso "for outstanding and pioneering contributions to the physics of quantum confined photonic systems and their applications, ranging from bandstructure engineering and the invention of Quantum Cascade Lasers to the physics and engineering of metasurfaces".

Among the other awards the Section assigned: Distinguished Service Award, Awards for the Italian Chapters, Awards for Students Branches, Awards for YPs, Award for Industry, Awards sponsored by Industry. All the awards are visible on the page: <https://italy.ieeer8.org/awards/>

Italy Section continues to strengthen its relationship with Italian Technical Associations AEIT, and AICA, with which a MOU was signed. This year we have in program four events in collaboration with AEIT and two events with AICA.

Italy Section strongly improved the website to further and better inform the members about the recent news of the Section, the Chapters, Section Committees, Student Branches, Young Professional, other activities, announcements. See Section website for all the information (<https://italy.ieeer8.org/>).

The new YP officers have been elected and they will enter in the role from the next 1 November 2020.

Challenges (with a focus on what support is required from Region 8)

To attract new generation towards IEEE - Region 8 could support the Sections towards the promotion of Industry-Students events.