

Executive summary of the program

SS12 2018 – Age of Innovation

SS12: Age of Innovation 2018 is an international project competition and a maker fair to recognize the best social innovation, in the theme “Empathy to Engineering: Solutions for Micro Issues”. This year the competition comes in 4 flavors: Innovation Challenge , Maker Fair Exhibition, Virtual Track ,Junior Einstein Track

Innovation Challenge and Maker Fair Exhibition events are open for all the University undergraduates in Asia. For the Virtual Track of the competition both Asian and non–Asian teams can apply. Junior Einstein Track is a special track for the school children. Prelim rounds of the SS12 competition will be held in multiple Asian and African countries.

Being the prominent technology oriented competition, held in Asia Pacific Region, with the participation of competitors from the entire Asia, this event would be an ideal platform to create awareness on sustainable solutions that improve quality of life.

Introduction

IEEE SS12 is a Project Competition conducted to recognize the best social innovation application on the theme: ‘Empathy to Engineering: Solutions for Macro-issues’.

Undergraduates from Asian Universities will be designing mobile app, computer based or IoT based solutions to address global issues such as poverty and famine, disaster management and first aid, special needs, women safety, healthcare, and illiteracy.

Going just beyond addressing social issues, SS12 2018 competition aims to take the engineering solutions to next level by enabling the students to learn the policies and governing standards in the respective areas of engineering.

This year the competition comes in 4 flavors: **Innovation Challenge, Maker Fair Exhibition, Virtual Track (open for global competitors), Junior Einstein Track (for school children)**

Innovation Challenge and Maker Fair Exhibition events are open for all the University undergraduates in Asia. For the Virtual Track of the competition both Asian and non–Asian teams can apply. Junior Einstein Track is a special track introduced from this year focusing the school children. The competition is in two stages: Preliminary Competition in the pilot level and Final Competition. Preliminary competition is organized as satellite competitions in several Asian countries while the finals are held in a selected country. The final competition hosting country is selected after a bidding process and for this year IEEE Sri Lanka has been selected after assessing their ability to host the event. The competition organization is spearheaded by a global steering committee and an executive committee from the final competition host country.

Basic timeline for the execution

SS12 Project Contest and Maker Fair – 2018					
Jan	Feb	Mar – Jun	Jul	Aug	Sep(8 th and 9 th)

International Committee formation, Pilots training and partnerships to be determined	Sponsors, Partners to be approached, Prelims announcement by Pilots	First round of SS12 in pilot universities and team selection for finals Team Registration		preparation for event	Event
	Call for Maker Fair	registration for maker fair with abstract	Short listing teams for maker fair		
		Call Junior einstine track			

For more details, Web : <https://www.ieeess12.com> , Facebook : <https://www.facebook.com/IEEESS12/>

Scalability and sustainability of the program

SS12 competition was initiated in 2016 and this year we are looking at the 3rd consecutive occurrence of the SS12 project competition.

In 2016 SS12 competition was organized in 4 Asian countries with 11 pilots and the final competition was held in Coimbatore, India. In this occurrence of AA12 Innovation Challenge and Maker Fir tracks were conducted with nearly 978 competitors including the pilot level.

In 2017 Virtual track was introduced to SS12 competition and number of pilots increased to 15 and one other country was also added to the pilot list. The final competition was held in Hyderabad India in this occurrence of SS12.

Currently for SS12 2018 more than 30 pilots have been registered from India, Pakistan, Bangladesh, Afghanistan, UAE and African continent. It has been estimated that over 2000 participants, including international and local competitors representing, IEEE volunteers and other invitees, will be participating in SS12 2018.

Version	Participants including Prelims	No of countries	No of Universities	No of pilots	No of tracks
2016	978	4	20	11	2
2017	1500	5	39	15	3
2018 (Expected)	2500 and above	5+ Asian, African and Middle East Countries	60	30	4

The initiative being supported by IEEE Humanitarian Activities Committee and IEEE Women in Engineering Affinity group in the previous instances (2016 and 2017) and we are with positive discussion with these two groups for partnerships for this year as well. IEEE Sri Lanka Section and IEEE Education Society of Madras Section are partners for SS12 2018. On NGO side Project Possibility and Real Breakthrough are two long term SS12 partners we are having for this year as well.



SS12 Organizing Committee

IEEE SS12 organizing committee is a group of eminent leaders from IEEE global as well as IEEE region 10 as well as dedicated volunteers from the region.

Chair:	Prof. Ramalatha Marimuthu, Kumaraguru College Of Technology, IEEE SSIT Board of Governors
Chairs, Partnerships:	Mr. S Purushothaman, ISRO, India Prof. Parkash Lohana, Usman Institute of Technology, IEEE R10, Pakistan
Chairs, Operations	Ms. Udari de Alwis, SYNERGEN Technology Labs ,IEEE YP R10 ,Sri Lanka Ms.Nuwanthika Rajapaksha, SYNERGEN Technology Labs , Sri Lanka Mr.Chandana Munasinghe, SYNERGEN Technology Labs , IEEE YP SL, Sri Lanka
Chair Design	Mr. Pasan Ranathunga , 99X Technology, IEEE SL, Sri Lanka
Chair, Communications	Ms.Tasnim Binte Shawkat, RUET, Bangladesh
Chair, Junior Einstein Track	Mr.Vishnu PR, Infosys Ltd, India
Chair, Virtual Track	Mr.Vamsi J Krishna, stuMagz,India
Chair, Maker Fair	Mr. Navaneethakrishnan, Kumaraguru College of Technology, India
Chair, Innovation Challenge	Mr. Abilash Praveen, Concise Creative, India
Advisor	Mr. Divyanshu Verma , Intel , India
Advisor	Dr. Bozena Pasik-Duncan , IEEE WIE Global Chair, Kansas University, USA
International Liaisons	Dr. Stanley Lam, President, Project Possibility, USA
Immediate Past Chair	Dr. Sagar.G, Vardhman College of Engineering, India

How does the program align with some of MGA goals and the educational outcomes of the program

- SS12 being the platform to recognize the best social innovation application on the theme: ‘Empathy to Engineering: Solutions for Macro-issues’ which highlights IEEE’s vision to Advancing Technology for Humanity
- Identify the best marketable products based on the novelty and market requirements and bring out the entrepreneurial spirit in the students. - The Team which won the first prize in 2017 version has incubated the product and has transformed into a startup.
- Increased student member involvement in creating technical innovation to solve regional social problems

- Encouraging more female participation in technology based competitions: Special WIE award for the best solution presented by a team consisting more than 75% of female undergraduates
- Encouraging school children to engage in technology related projects and providing a platform to showcase their talent through Junior Einstein track
- Exposing the students to new technologies and enhancing the practical use of technology in problem solving
- Exposing young volunteers in organizing international level and improve their organizing skills.
- The final competition will be held as a Tech Fest event making it a platform to bring together innovators, industry, community and field experts. We are inviting field experts of technology and humanitarian sciences and innovations to share their experiences as keynote speakers. This will be an open house event where industry and community can visit the project exhibitions, presentations and interact with the students.

Impact of the program to the participants

Following are several instances where the projects developed under SS12 competition made a significant impact to both the community and the students and we look forward to expand the opportunities in this year's occurrence of SS12.

Humanitarian Outreach

The lasting impact of the elements of the event is the products developed as a result of the projects submitted. In 2016 SS12

- The project low cost Ankle Foot Orthosis is being developed into a product by the research cell of the Kumaraguru College of Technology in collaboration with the Kovai Medical Centre Hospital.
- A local NGO called AMAZE has taken one of the projects and the students under their wing to develop learning modules for the special children.
- Project android app developed for agriculture is being elaborated into web app and website for the benefit of the farmers by the Tamilnadu Agricultural University and Yellow Tree Academy in collaboration with the Govt Sponsored Incubator called CIBI.

SS12 being the breeding grounds for Entrepreneurs

Most of the winning teams from previous occurrences of SS12 have stepped to the path of entrepreneurship while being undergraduates.

- SS12 2016 : Winners from the innovation challenge (Team Iris) and maker fair (Team Wildcards) secure winnings in Disrupt Asia Future X, CIMA Launchpad which were the key startup competitions for university based startups in Sri Lanka. The product created by team Iris was a 'Brail Band' : A haptic motor operated band for blind people and team Wildcards created 'Spec Buddy' : Object identification glasses for blind people.
- SS12 2017 : Winners from maker fair (Team AngelJX) has already formed an award winning startup 'Nurone Labs' while being undergraduates. The winning product from team AngelJX was a lifesaving drone; a drone having the capability to save drowning people.
- SS12 2017:Winners from the Innovation Challenge (Team Wind Turbine) have incubated their product with a self-start up supported by the prize money of \$1000 and industry based sponsors from the SS12 and Maker Fair 2017.