

# ROAD MAP

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## IESL - JUNIOR INVENTOR OF THE YEAR 2022

*Young Inventors for a Better Future...*

INSTITUTION OF ENGINEERING, SRI  
LANKA

120/15 Wijerama Mawatha, Colombo 7



## OBJECTIVES

- *Bringing the essence of the, Junior Inventor of the Year 2022 Competition, By the Institution of Engineers Sri Lanka(IESL) To the School Apprentices*

# OVERVIEW

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Introduction  
to IESL

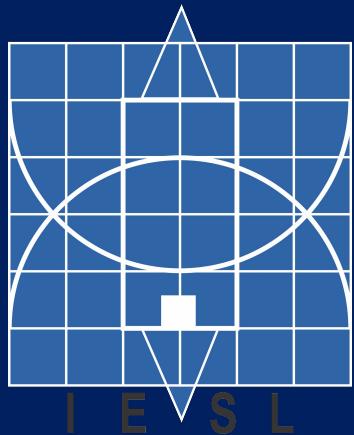
Introduction  
to  
IESL- JIY

Benefits of  
the  
Competition

Introduction  
to Past  
Winners

How to  
Prepare

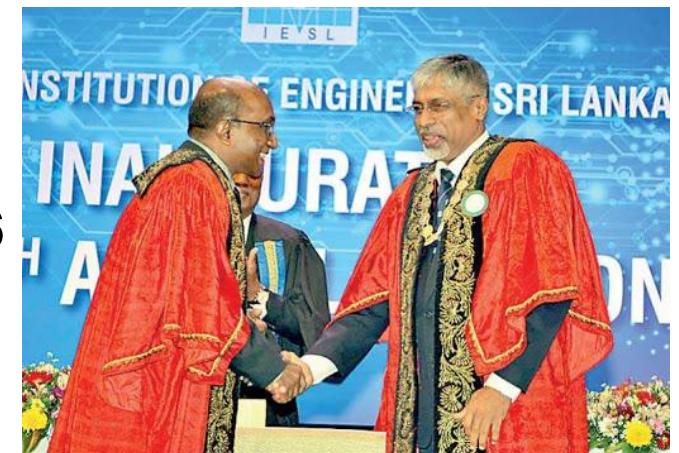
# Institution of Engineers Sri Lanka (IESL)



## Vision

Be amongst the leading professional institutions in engineering and technology in the world

- Established in **1906** as the Engineering Association of Ceylon
- Revolutionized into the Institution of Engineers, Ceylon, in 1956
- Upgraded to the Institution of Engineers, Sri Lanka in 1996



# About Ourselves

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## ✓ Mission

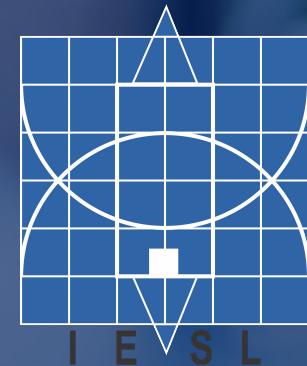
To be the apex national body of engineers in Sri Lanka which ensures internationally recognized and locally relevant standards in the professional practice and education in engineering, while actively supporting national development and diligently serving its members and the society at large.

## ✓ Composition

- Total Membership - 20,248
- Corporate Members - 5,230
- Fellow - 526
- Honorary Fellow 3
- Associate Members - 11,594
- Affiliate Members – 145
- Companions – 9
- Associates – 32
- Student Members - 2,709

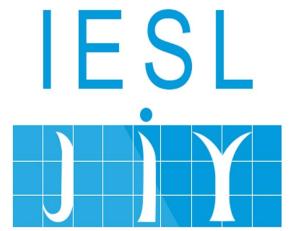
## ✓ Functional Arms

- Engineering Sectional Committees
- Overseas Chapters
- Provincial Chapters
- University Chapters
- Forums



# Junior Inventor of the Year (IESL – JIY)

*Young Inventors for a Better Future...*



## VISION

*Encouraging Innovation in Engineering and Technology, Amongst School Children in Sri Lanka*

## WHAT IS IT?

- An annual competition organized by IESL, Island-Wide
- To Promote Creative and Innovative Thinking amongst the school children in Sri Lanka
- Initiated in 1980
- Open to all Sri Lankan students pertaining to the age group of 12-19

# History and Broadcast of the Competition



First Ever JIY Competition in 1980



## Initiation

*In 1980, IESL HQ, Colombo*



## 1980-2000

*Annually 50 Inventors, IESL HQ, Colombo*



## Provincial Awareness Programs

*Pioneered in Sabaragamuwa and Central Provinces, back in 2000*



## Provincial Level Competitions

*Pioneered in Sabaragamuwa Province, back in 2002*



## Provincial Awareness Programs

*Expanded in Uva Province in 2003*



## Introduction of Scholarship Schemes

*Introduced back in 2004 for JIY Winners.*



## Residential Workshops

*Initiated in 2005 for the competition Applicants*

# History and Broadcast of the Competition (Cont.)



National Engineering Exhibition in 2006



## Provincial Competition

*Expanded to North-Central Province in 2005  
Expanded*



## Approach to Exhibitions

*Inventions by finalists were displayed at National Engineering Exhibitions in 2006*



## In 2006

*Selection of Best School and Best teacher was brought to the competition*

*Expand of the Provincial Competition and Awareness Program to Southern Province  
Engaged with National Engineering Research Development Center (NERD)*

*Engaged with University of Moratuwa (UOM)*



## In 2007

*Affiliated to Sri Lanka Science & Engineering Fair with collaboration of IESL, MOE, Intel Sri Lanka and National Science Foundation*

*Affiliated with Intel International Science & Engineering Fair (Intel ISEF)*

# History and Broadcast of the Competition (Cont.)



JIY Stall in National Engineering Fair, in  
2008



## In 2008

*JIY stall became the most visited stall in the National Engineering Fair*

*Award ceremony took place at the National Engineering Exhibition – Techno*

*Scholarship & certificate award ceremony was held at the IESL annual sessions*



## In 2009

*Provincial Awareness Program and the Competition was expanded to Northern and Eastern Provinces*

# Through JIY, You Stand to Win

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Exclusive Cash Prizes  
and Awards



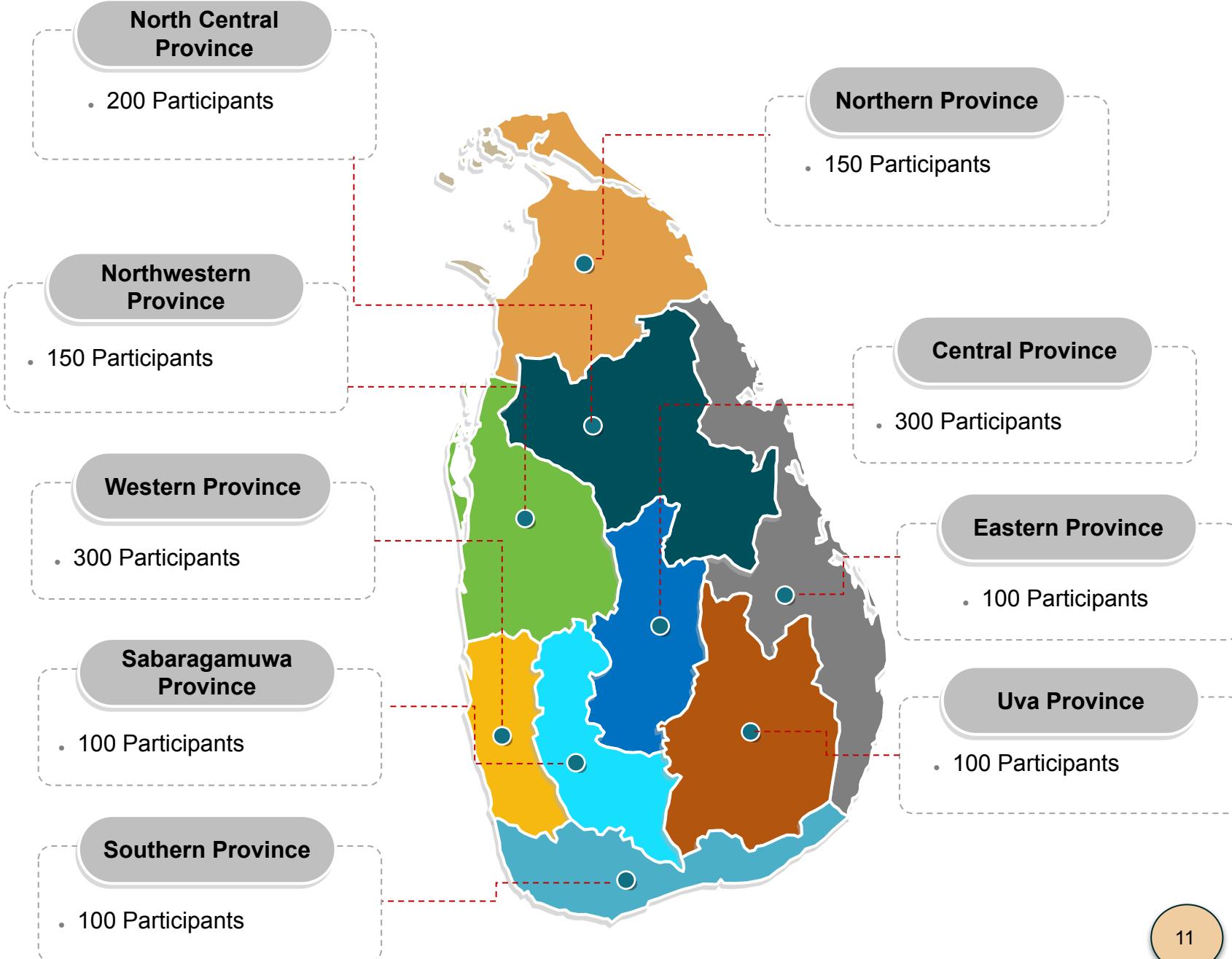
Scholarship  
Opportunities



Research Internships

# Participation

- *IESL – JIY Competition secured over 1500 Competitors at Provincial Preliminarily Levels (2019).*
- *Among the 1500 preliminary participants, 60 were selected To participate in the Final Competition*
- *The Most distinguished 20 among the 60 , gained the opportunity to display their produces, in National Engineering Exhibition – Techno*



# Road Map of the Competition

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**Provincial Preliminary Levels of the Competition**



**Workshops and Awareness Sessions  
for the Selected 60 Students**

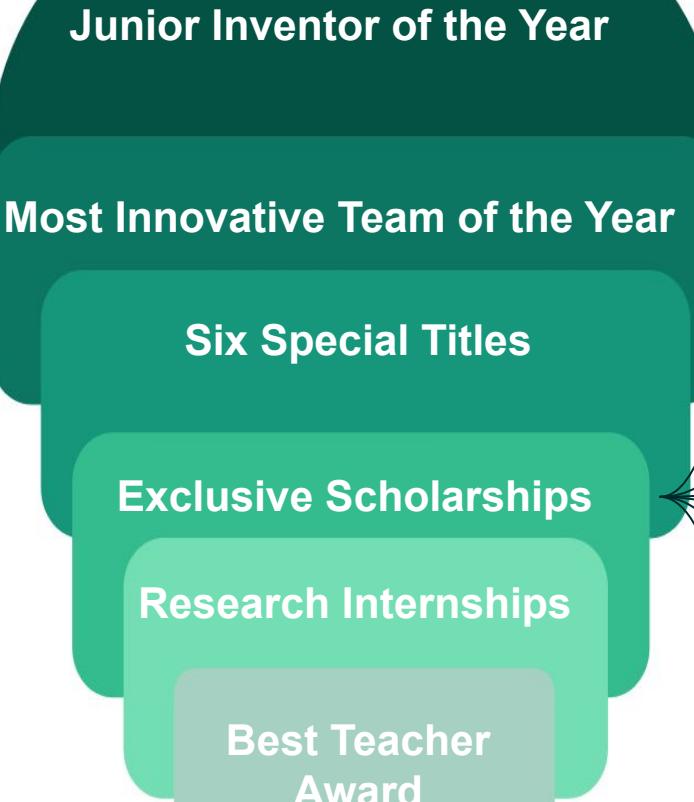


**Final Competition to Select 20  
Students**



**Techno  
Exhibition**

# Benefits Of The Competition



Best invention for  
day-to-day life usage

Best invention for  
energy saving

Best invention for  
ensuring personal  
safety

Best invention for  
improving  
efficiency.

Best environmentally  
friendly invention

Best invention done  
using local raw material

# Workshops for JIY Finalists at NERD

## What is NERD ?

National Engineering Research and Development center of Sri Lanka is the platform for engaging in Research and Development activities to develop, acquire, adapt and transfer Engineering Technologies that would have a direct impact on the Socio-Economic Development of Sri Lanka.

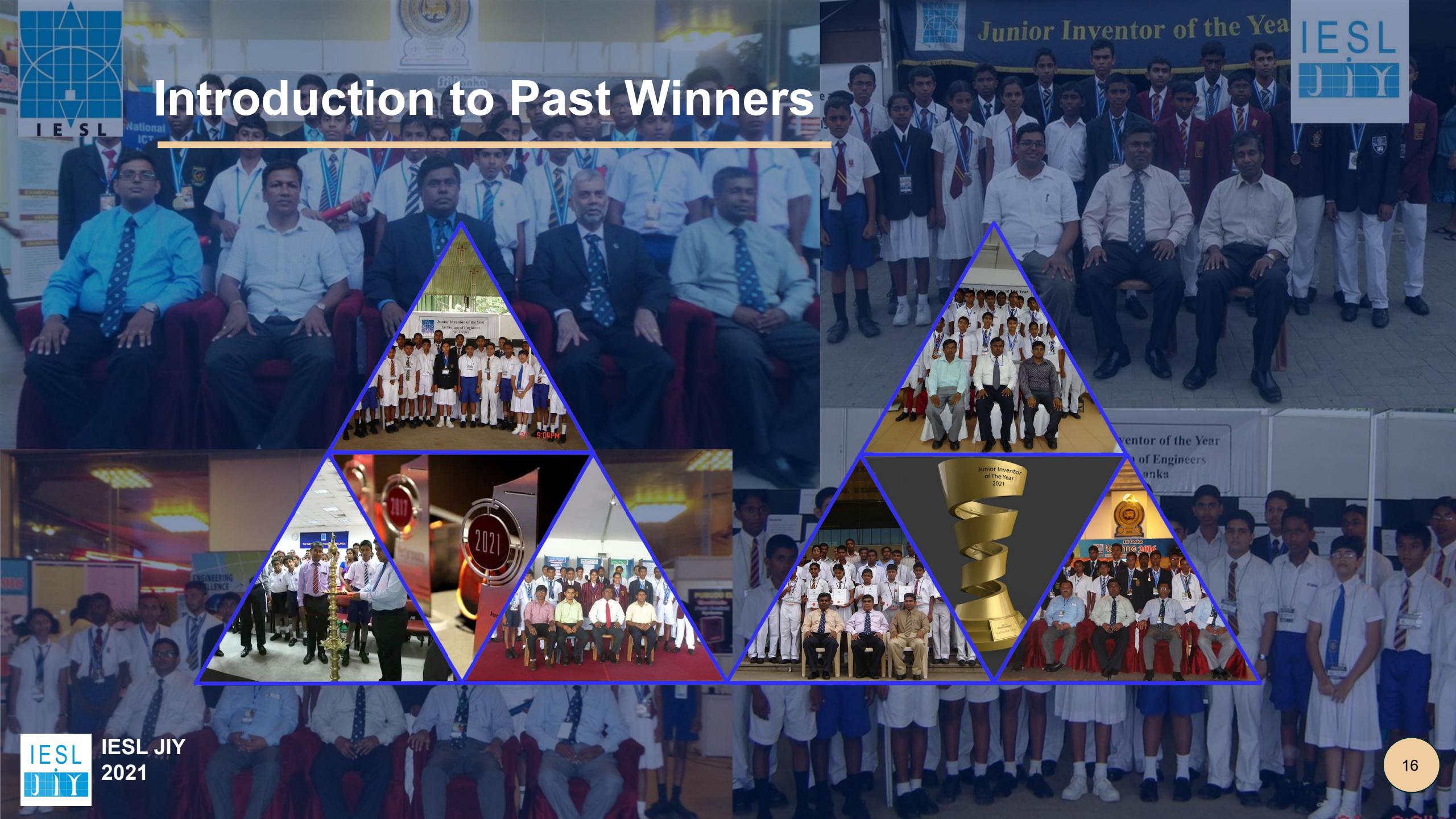


# Workshops at University of Moratuwa

Finalists of JIY are entitled to experience exclusive workshops at University of Moratuwa.



# Introduction to Past Winners



# JIY WINNERS 2007

Yasith Kanchana Lokuge  
Ananda College, Colombo 10



- Intel ISEF 2008 Finalist, Atlanta, USA
- Herbert Hoover Medal - International Exhibition for Young Inventors
- Award for Mechanical Structural Design - Silver
- Award for Safety & Healthy Enhancement – Bronze
- 'Best m-Education & Learning' award at the mBillionth Awards South Asia 2014, India.

# JIY WINNERS 2009

Ganindu Nanayakkara  
Ananda College,  
Colombo 10



- Intel ISEF Grand Award, San Jose, USA
- Intel excellence Award
- China Association for Science & Technology Award
- Symantec Corporation Award
- National Collegiate Inventors & Innovators Alliance/ The Lemelson

Maduranga  
Karunajeewa  
Rajasinghe Central  
College, Ruwanwella



- Intel ISEF Finalist, San Jose, USA
- Presidential award first place winner (Transport category)- SLIC

# JIY WINNERS 2010

Timira Shanuka  
Thilakarathne  
Ananda College, Colombo



- Intel ISEF Finalist, Los Angeles, USA
- Intel excellence Award in Computer Science

# JIY WINNERS 2011

Nipuna Kavishka Silva  
and Pipunika Vimanthi  
Silva  
De Mazenod College,  
Kandana



- Intel ISEF Finalist, San Jose, USA
- Presidential award first place winner (Transport category)- SLIC

# JIY WINNERS 2012

Pubudu Dinesh Kapuge  
Mihinthale Maha Vidyalaya,  
Mihinthale



- Intel ISEF Grand Award-Electrical & Mechanical Engineering- 1st Place, Arizona, USA
- Special award from the Ashtavadhani Vidwan Ambati
- Subbaraya Chetty Foundation

# JIY WINNERS 2013

Namal Udara Piyasir  
Thambuththegama  
Central College,  
Thambuththegama



- Intel ISEF Grand Award-Electrical & Mechanical Engineering
- 2nd Place, Los Angeles, USA
- Special award from the American Intellectual Property Law Association
- Special award from U.S. Agency for International Development

# JIY WINNERS 2013

Nipun Kavishka Silva  
De Mazenod College,  
Kandana



- Intel ISEF Grand Award- Computer Science - 4th Place, Los Angeles, USA

# JIY WINNERS 2014

Sanju Subodha  
Sewwandi  
Bomiriya Central  
College, Kaduwela



- Intel ISEF Grand Award - Engineering Mechanics - 4th Place

# JIY WINNERS 2015

Abishek S. Gomas  
Belvoir International  
College, Wellawaththa



Chamindu Jayasanka  
Rajapaksha Central  
College



- Third place “Embedded System” category
- Won the dreamed copy of patent and Trademark Office Society for the unique project titled “Modified and Adjustable Crutches”

# PERFORMANCE AT INTEL INTERNATIONAL SCIENCE & ENGINEERING FAIR

**Shehan Kanishka & Ravindu  
Sankalpa**

- SRPC Finalist
- Grand award 4th place in the Category of Earth & Environmental Sciences
- Award from King Abdul-Aziz & His Companions Foundation for Giftedness and Creativity



# PERFORMANCE AT INTEL INTERNATIONAL SCIENCE & ENGINEERING FAIR

**G Kavinda Bandara & K Gimhan Wijayawardana  
From St Anthony's College,  
Kandy**

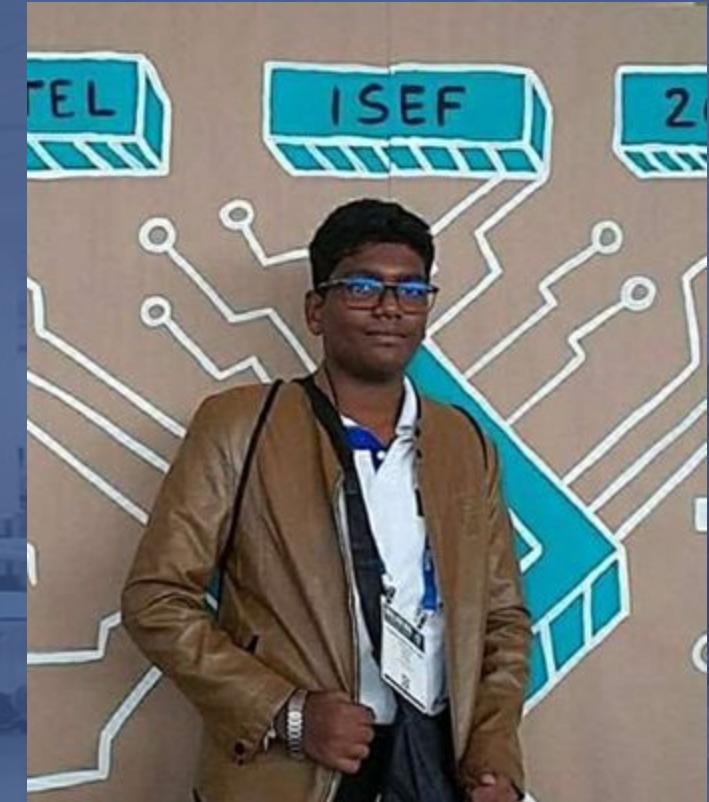
- Won a grand award in the category of Embedded Systems at the Grand Award Ceremony for their unique project titled 'Smart Walking Stick for Blind (Golden i)'



# PERFORMANCE AT INTEL INTERNATIONAL SCIENCE & ENGINEERING FAIR

Rumal Induwara from Ananda National School, Chilaw

- Won a grand award in the category of Microbiology for his research titled 'Isolation of a Potential Microbial Agent for Controlling Dengue Vector Mosquitoes in Sri Lanka'.



# PERFORMANCE AT INTEL INTERNATIONAL SCIENCE & ENGINEERING FAIR

**W A Kavith Budwin Udapola from  
Sandalankawa Central College,  
Sandalankawa**

- Won a grand award in the category of Embedded Systems at the Grand Award Ceremony for their unique project titled ‘Smart Safe Gas Regulator’



# JIY FINALISTS ...

2009 finalists

2010 finalists

2011 finalists



# JIY FINALISTS ...

2012 finalists



Techno 2012 – JIY Finalists

2013 finalists



Techno 2013 – JIY Finalists

2014 finalists



# JIY FINALISTS ...

2015 finalists

2016 finalists

2018 finalists



# JIY FINALISTS ...

2019



2021



# How to Prepare



- Focus On  
Engineering/Scientific Research  
instead of Invention
- Conduct  
Trials and Experiments
- See to  
A Literature Survey
- Seek  
Knowledge from Experts
- Study  
On available Devices,  
Mechanisms and Solutions
- Maintain  
A Log Book

# How to Conduct A Research

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Identify the Problem



Fabricate Your Design



Analyze and Compare the Results



Conclude



Prepare a Report



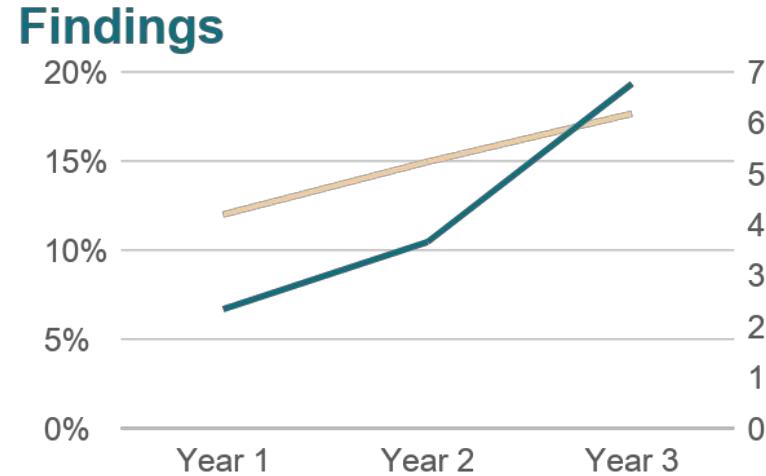
Test the Device

Discuss the Results

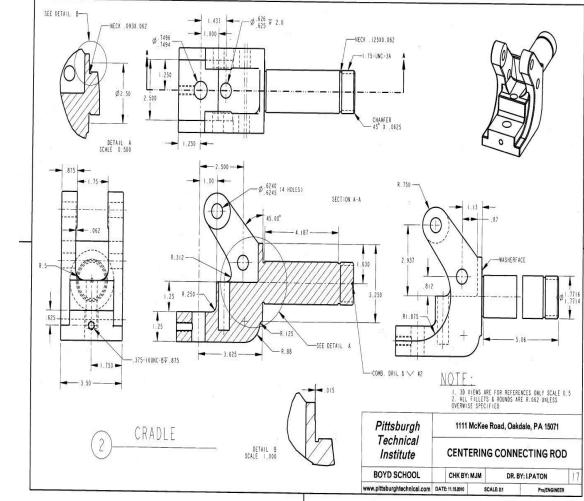
# How to Prepare the Display for the Cubicle



Showcase Your  
Physical Model



Summarize Your Findings  
In Graphs



Show Drawings of Your  
Design

- Make Sure to Have your Logbook Present at the Cubicle, All the Time



# INTERVIEWS

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- Answer in English ( taxi driver English is good enough)
- If difficult use a translator, (You may need a translator to understand difficult accent and some words)
- Questions are open-ended
- Don't memorize a speech

# You Will Be Judged On,

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**For the lab or field work  
and theory. (not just  
library research or  
'gadgeteer')**

**On Genuity of  
Your Work**

**Your knowledge about  
the display**

**Work you have  
conducted within a time  
of 1 year**

**Involvement with the  
previous work**

# Marking Criteria

Criteria	Considered Factors	Marks For Individual Participant	Marks For a Team of Participants
Creativity	Investigation	30	25
	Data collection		
	Research approach		
Engineering goals	Clear objective	30	25
	Workable		
	Economical		
	Usefulness		
Thoroughness	Scope	15	12
	completeness		
	Repeatable results		
	Awareness of existing solutions		
	Time spent		

# Marking Criteria (Cont.)

Criteria	Considered Factors	Marks For Individual Participant	Marks For a Team of Participants
Skill displayed	Experimental & Design Skills	15	12
	Usage of instruments		
	Skill in Seeking Help		
Clarity	Clarity of the Explanation	10	10
	Clarity of the Logbook and Notes		
	Clarity of the Display		
Teamwork	Clear Distribution of Work	-	16
	Well Balanced Work Distribution		
	Coordinated Effort by All Members		
	Knowledgeability of All Members		

# THANK YOU!

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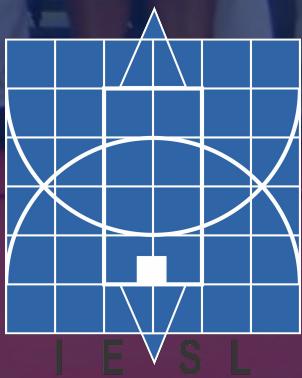
IESL JIY Committee



[jiy@iesl.lk](mailto:jiy@iesl.lk)



Deputy Executive Secretary (Education),  
The Institution of Engineers Sri Lanka,  
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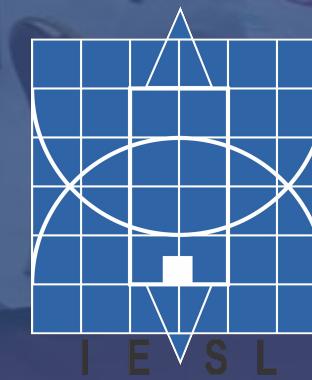


IESL  
JIY

# IESL - JUNIOR INVENTOR OF THE YEAR - 2021

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Register Now!!!



IESL  
JiY