IT Sligo 50
An Institiúid Teicneolaíochta, Sligeach

Abbott

Sligo Engineering Fair 2020

Sunday 1st March
12.00 - 5.00pm IT Sligo

Science Foundation Ireland sfi For what's next

SMART FUTURES

STEPS
Engineers Week
Feb 29 - Mar 6 2020

Sligo Engineering Fair at IT Sligo

SUNDAY 1st MARCH 12.00 - 5.00 PM

A family event explaining engineering in a fun way!

The 2nd Engineering Fair at IT Sligo will include a wide range of performances, interactive displays workshops and demonstrations for all the family to enjoy.

Design-Build-Discover

Lots of fun guaranteed for children and adults.

The Sligo Engineering Fair is a FREE to all event.

No advanced booking required
All activities are drop in
Workshops are repeated throughout the day *
Workshops are on a first come basis with the following sessions allocated places if required .
Information available at the workshops on the day

*3D gaming has one session only with tickets available on the day from 12 noon at the Fair Day reception

Designing & Building our FUTURE

Sligo Engineering Fair at IT Sligo

SUNDAY 1st MARCH 12.00 - 5.00 PM

Performances

ROBOTHESPIAN
MAIN ENTRANCE– ALL DAY

The first and most iconic robot from Engineered Arts. Featuring an incredibly expressive range of movements and emotions, he is the perfect talking robot. He is at home as an entertainer, salesman, an actor in a film or theatre or as a teacher. Come along to the Sligo Engineering Fair Day and meet robothespian, have a chat and interact with the robot with natural intelligence that captivates and inspires wherever it goes.

ENGINEERED ARTS

VICTORIA WALKER DANCE'S 'ROBOTIC RHYTHM'
BLACK BOX THEATRE
1.00, 2.30 & 4.00PM

Victoria Walker Dance's "Robotic Rhythm", a new choreographed dance piece looking at engineering movement – come along and join us bringing engineering to life!

A ROUGH GUIDE TO ENGINEERING

AURIVO B1094
12.15, 2.30 & 4.00pm

What is Engineering? Where can you find it? Come along on a journey around the world and find out all about what engineers do, and how they do it!

Discover how engineers design cars that go hundreds of miles an hour, build structures that can survive earthquakes, and cook food by using only Mirrors! “A Rough Guide” can show you how engineering has changed our lives! This is a careers driven show aiming to introduce secondary school pupils to the wide range of careers available in engineering, and to show them that they can aspire to be engineers too!

Demonstrations & Interactive Workshops

AIR POWERED ROCKETS WITH WONDERSTRUCK C BLOCK FOYER– ALL DAY

Particpants work in pairs or individually to build paper and card rockets. Once complete, we launch the rockets from our custom built launchers, supplying launch pressures up to 100 psi! The main STEM topics covered in this workshop are: Forces, Aerodynamics & Friction, as well as more holistic skills such as team working, communication, investigation etc.

HYDROGEN CAR CHALLENGE WITH ARCOLA ENERGY B1080 – ALL DAY

Can hydrogen provide a viable method of energy storage for vehicles of the future? This hands-on workshop allows participants to design and build a hydrogen powered model vehicle. Working in small groups, participants will design and construct their own model vehicle. Each group will be provided with a hydrogen fuel cell to power their vehicle. Groups will then compete against each other to discover which design is the most efficient. Participants are encouraged to take an iterative approach, designing and building vehicles quickly so they can see what works and what doesn't, working out ways to improve their distance each time they test.

ABBOTT MAIN CONCOURSE – ALL DAY

Abbott is a global healthcare leader that helps people live more fully at all stages of life. Our portfolio of life-changing technologies spans the spectrum of healthcare, with leading businesses and products in diagnostics, medical devices, nutritionals and branded generic medicines. Our 103,000 colleagues serve people in more than 160 countries.

Abbott serves the Irish market with a diverse range of health care products including diagnostics, medical devices and nutritionals products. In Ireland, Abbott employs almost 4,000 people across nine sites. We have six manufacturing facilities located in Clonmel, Cootehill, Donegal, Longford and Sligo and a third-party manufacturing management operation in Sligo. Abbott has commercial, support operations and shared services in Dublin and Galway. We have been operating in Ireland since 1946.

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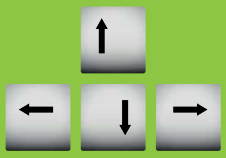
3D GAME PROGRAMMING WORKSHOP WITH NEIL GANNON
D2039 – 1PM

Develop a 3D game from start to finish in this game programming session that covers all the core fundamentals of games development. Tickets need to be pre-booked at main reception area. Max. 24 participants
Minimum age 12 + years



AUTOMATA – MECHANICAL ART WORKSHOP WITH FIRE THE INVENTOR
B1082—ALL DAY

Exercise your artistic skills while learning some basics about mechanical movement in this creative technology workshop. Using a mix of pre-made parts, chopsticks, a cardboard box, and a load of art and craft materials, you can engineer a moving toy or automata that bursts into life at the turn of a handle. Suitable for all ages (younger children will need adult help).

ENVIRONMENTAL PROTECTION AGENCY MAIN CONCOURSE – ALL DAY

The EPA will take part in the IT Sligo Engineering Fair for the first time this year. They will feature equipment used in their day to day work including a drone, a noise meter, flow measuring units and landfill gas monitoring equipment. There will be information on the work of the EPA and they will offer advice on how you can help protect the environment we live in.

THE FLIGHTS OF FANCY WITH GREG, ANNE, TONY, ISABELLA & ROBIN
E1007 – ALL DAY

Interactive workshop where participants build various engineering flying toys, paper helicopters, parachutes and blimps. The children will then launch them from a kite high in the sky!

BUILDING THE FUTURE WITH ENGINEERS IRELAND NORTH WEST MAIN CONCOURSE – ALL DAY

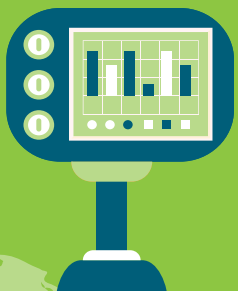
Take the opportunity to meet professional engineers from various industries, living and working in Sligo and Leitrim. Challenge them or your friends/family to a Lego Tower Building Race or have a go at being a bridge engineer. Learn about what it's like to work as an engineer, the kinds of projects engineers work on, and industry trends. Hear about Engineers Ireland, the professional body which represents 26,000 engineers across Ireland.

BUILDING INFORMATION MODELLING MAIN CONCOURSE – ALL DAY

See the exciting range of 3D digital technologies being used for the construction sector. An interactive display from IT Sligo's Department of Civil Engineering and Construction.

WATER WORKS PRACTICAL E0009 – ALL DAY

Become a Civil Engineer and do amazing things with water through this practical workshop.



FREEZING FREEZERS DESIGN, BUILD AND TEST YOUR OWN FREEZER! B1202—ALL DAY

Refrigeration powered by electricity has changed our lives. We use fridges and freezers to preserve food and this means that we can eat foods that are out of season and we can also transport food to places that it couldn't have previously reached without going off.

In this workshop you will investigate other methods of cooling and will use this knowledge to design and build your own freezer. To test the effectiveness of your newly made freezers you will see if you can use it to make ice cream.

Of course eating the ice cream will be the ultimate test.....

WOOD TECHNOLOGY PRACTICAL M0008 – ALL DAY

Become a Master Builder and learn how to make something nice with wood and keep it! Facilitated by staff from the BSc in Advanced Wood and Sustainable Building Technology Programme.

ENGINEERING MOVIE TIME

DREAM BIG: ENGINEERING OUR WORLD
A0006 – FILM SHOWING TIMES: 12.05, 1.50 & 3.50PM

Running time : 42 mins

Narrated by Academy Award® winner Jeff Bridges, Dream Big: Engineering Our World is a film that will transform how we think about engineering. From the Great Wall of China and the world's tallest buildings to underwater robots, solar cars and smart, sustainable cities, Dream Big celebrates the human ingenuity behind engineering marvels big and small, and shows how engineers push the limits of innovation in unexpected and amazing ways.

INVENTING TOMORROW
A0005 – FILM SHOWING TIMES: 12.30 & 3.00PM

Running time : 1hr 26 mins

Meet passionate teenage innovators from around the globe who are creating cutting edge solutions to confront the world's environmental threats – found right in their own backyards – while navigating the doubts and insecurities that mark adolescence.

HIDDEN FIGURES
A0004 – FILM SHOWING TIMES: 1.00 PM

Running time : 2hr 7 mins

Women in engineering. Hidden Figures is a drama, based on true events, about a group of African – American women who were hired by NASA for their skills in mathematics to be part of America's space programme in the 1960's

ADVANCED MANUFACTURING MAIN CONCOURSE – ALL DAY

Shaping the future of manufacturing – What do the following have in common? Shoes, sunglasses, knee implants, hearing aids, aeroplane parts. The answer is they can all be made using 3D printing technology! Advanced manufacturing is changing how things are made, through digital technologies such as 3D printing, data analytics and artificial intelligence. Visit the advanced Manufacturing demo area to see a sneak preview of the next industrial revolution in action, and to meet the engineers who are using 3D printing to make it happen!

www.pemcentre.ie

The PEM Technology Gateway is funded under the Enterprise Ireland Technology Gateway programme.

www.i-form.ie
@I_Form_Centre

I-Form is an SFI Research Centre funded under the Science Foundation Ireland Research Centres Programme and co-funded under the European Regional Development Fund.

IT SLIGO CONTRACT RESEARCH UNIT MAIN CONCOURSE – ALL DAY

What can I do about Climate Change? Become an active citizen and help us achieve a cleaner energy future. Why not set up or join a Sustainable Energy Community (SEC)? There's a growing network of over 300 SECs in Ireland bringing awareness and action to their localities to become greener healthier places.
Join the IT Sligo Contract Research Unit to find out about the supports available to plan and develop your energy saving ideas.

ENGINEERS WITHOUT BORDERS
MAIN CONCOURSE – ALL DAY

EWB-Ireland is a group of Irish engineers and scientists dedicated to bridging the gap between academia, industry and NGOs to give opportunities to learn about and contribute to sustainable development globally.
Our mission is to partner with disadvantaged communities to improve their quality of life through education and sustainable engineering projects. We promote global experience for engineers, engineering students, and similarly motivated non-engineers.

For more information on the branch in IT Sligo contact Gerard McGranaghan at mcgranaghan.gerard@itsligo.ie, or look up www.ewb-ireland.org.

SOLVING THE WORLD'S PROBLEMS WITH DATA & PEOPLE
MAIN CONCOURSE – ALL DAY

Solving the world's biggest and most interesting problems is getting easier with the use of data and artificial intelligence. What problems would you like to solve? This interactive stand will present some of the possibilities and invite you to learn more about solving problems that affect us all.

SLIGO BAY LIFE BOAT SERVICES
MAIN CANTEEN – ALL DAY

Take the opportunity to meet the volunteers and members of Sligo and Leitrim emergency services, hear their stories and see the equipment they use.

SCHOOLS ENGINEERING PROJECTS
MAIN CONCOURSE – 12.00-2.30PM

Exciting engineering projects demonstrated by primary school pupils from Sligo town and county.

THE MOUNTAIN RESCUE TEAM
MAIN CANTEEN – ALL DAY

The Mountain Rescue Team displays its equipment and abseiling techniques

CIVIL DEFENCE
MAIN CANTEEN– ALL DAY

GIANT JENGA IN THE CANTEEN

Have a go at this simple game that can teach us a lot about the world of structural engineering. Buildings, after all, are vulnerable to the same forces that can topple a Jenga tower

ENGINEERING TOOL ROOM TOURS
ENGINEERING TOOL ROOMS – E BLOCK
12.20, 1.20, 2.20, 3.20, 4.20PM

Have a tour of IT Sligo's modern engineering tool rooms featuring computer-integrated 2-D and 3-D multi axis machines, EDM machine, as well as a full range of machine tools.
See some of the machines in operation!

Further Events

MORE EVENTS DURING ENGINEERS WEEK

ENGINEERS IRELAND
NORTH WEST

PATIENT DATA MADE REAL
- making 3D printing routine in medicine -
Monday 2nd March - 6pm

Niall Haslam is an experienced researcher and software developer. He is currently the CTO of Axial3D - a medical 3D printing company in Belfast. They provide anatomical models for surgeons to help them plan operations more efficiently.
In this talk Niall will show how Axial3D is leveraging machine learning to lower barriers to access for 3D printing in medicine Axial3D and their technology automates the process of taking an individual patients CT/MRI scans and creating bespoke additive manufactured anatomy. These anatomically correct models for a patient are then used by surgeons to communicate with patients, practice surgical procedures and reduce the time and cost of surgeries, which all leads to greater patient care.
Teas & coffees will be served from 5.30pm.

ENGINEERS WEEK 2019 - CHARITY COLLECTION DAY

On **Monday 2nd March**, IT Sligo engineering students will seize their opportunity to make their contribution to Engineers Week and the local community by collecting money for NW Hospice.

This event has been successfully running for a number of years by the engineering students of IT Sligo. **This year's event will take place between 12 and 4pm at IT Sligo and in Sligo town centre.** Please give generously for this great cause.

ALICE PERRY'S ADVENTURES IN ENGINEERING

Three shows will be held in IT Sligo on Wednesday 4th March. These events are free but please note that booking is on-line at www.engineersweek.ie.

Meet Alice. She's on an adventure to see a friend, but needs lots of help to get there! Can you help her? In this show, Alice and your audience will discover different kinds of transport and engineering together to get across, land, sea and air!
What types of shape make a boat float the best? And do you know how a hot air balloon flies? Explore Alice's explosive rocket, and ride a real life hovercraft! This show involves and excites the whole audience, investigating the way we travel and explaining the science behind transport. This show is a memorable experience for everyone!

CONSTRUCTION PRODUCTIVITY SEMINAR, LCi and CitA
Thursday 5th March, 3pm
Aurivo Auditorium, IT Sligo

Lean Construction Ireland (LCi) and the Construction IT Alliance (CitA) are joining forces with IT Sligo to demonstrate how Ireland's exciting construction sector is transforming to become more productive using 3D digitisation and lean thinking.

For more information go to www.engineersweek.ie.

Thank You!

TO OUR SPONSORS

Sligo Engineering Fair Organisers sincerely thank Partners, Local Businesses and Community Groups for their support, including but not limited to:

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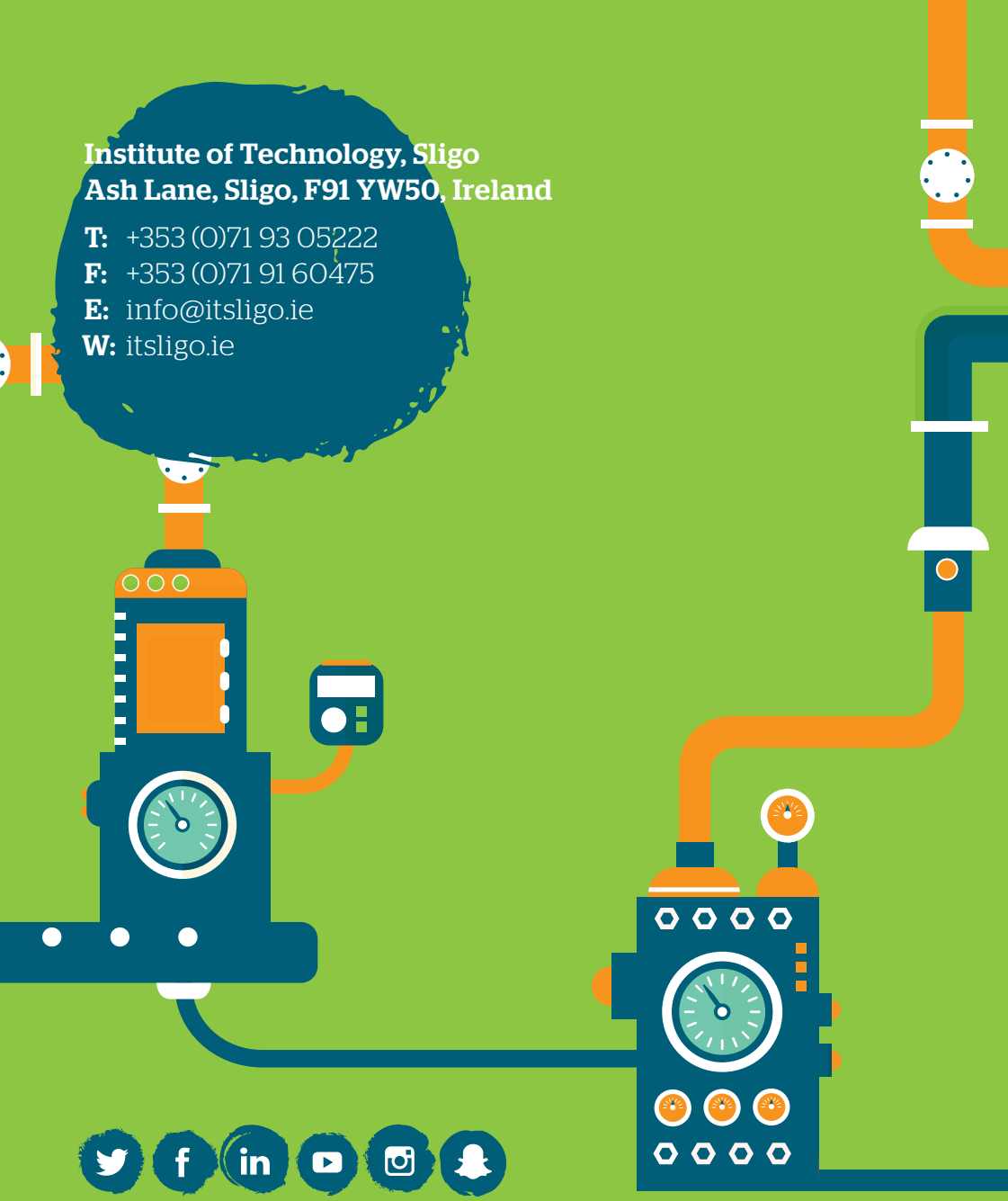

IT Sligo Open Day Saturday 4th April 2020, 10am – 2pm

Speak to Lecturers - Meet with students - Tour the Campus - Visit Accommodation - Be A Student for a Day

Book now www.itsligo.ie/openday

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