

# **WELCOME TO THE SINGAPORE SCIENCE FESTIVAL 2018**

Embark on a journey with us as we explore the wonders of Science, Technology, Engineering and Mathematics to create exciting works.

With an inventive line-up of more than 50 activities, workshops and games that explore the exponential possibilities of A.I. and scientific discovery, this guidebook has all the information you need to know about the month-long festival.

*A.I. You Ready?*



# EXPERIENCE

SINGAPORE MAKER 2-3  
EXTRAVAGANZA

A.I. READY@SC 4-5

X-PERIMENT! 6-7

DATE

17 AUG

LOCATION

OUR TAMPINES HUB  
FUNCTION ROOM (LEVEL 3)  
1 TAMPINES WALK,  
SINGAPORE, 528523

TIME

10am - 4pm

FEES

**1 DAY PASS**

Regular - \$200  
(includes a free 1-day  
pass to Maker Faire  
Singapore on 18 or 19  
August 2018)

Suitable for all ages.  
Register at  
<https://www.regonline.com/2018makerconference/>

EVENT

# SINGAPORE MAKER EXTRAVAGANZA



## MAKER CONFERENCE

The Maker Conference brings together makers and thought leaders to discuss the Maker Movement and how it's shaping the coming economy, local communities, education, government policy and initiatives. Speakers will explore The Role of Failure in Making and more.

DATE

18 AUG - 19 AUG

LOCATION

OUR TAMPINES HUB  
COMMUNITY AUDITORIUM  
1 TAMPINES WALK,  
SINGAPORE, 528523

TIME

10am - 6pm

FEES

1 DAY PASS

Adult - \$10

Child - \$5 (ages 3-12)

2 DAYS PASS

Adult - \$15

Child - \$8 (ages 3-12)

FREE PASS

Local school groups  
with more than 20  
students

Seniors aged 60yrs  
and above

Tampines residents

Suitable for all ages.

Register at

[https://www.eventbrite.  
sg/e/maker-faire-  
singapore-2018-  
tickets-48116321212/](https://www.eventbrite.sg/e/maker-faire-singapore-2018-tickets-48116321212/)

EVENT

# SINGAPORE MAKER EXTRAVAGANZA



## MAKER FAIRE SINGAPORE

The ever-popular Maker Faire Singapore is a family-friendly festival of invention and creativity that celebrates the do-it-yourself culture. From engineers to artists, and scientists to crafters, the festival is a venue for makers to showcase their hobbies!

**DATE**

**1 - 8 SEP**

**LOCATION**

**SCIENCE CENTRE  
15 SCIENCE CENTRE RD,  
SINGAPORE, 609081**

**TIME**

*Daily: 10am - 5pm*

**FEES**

**FREE PASS\***

\*Admission fees to Science Centre Singapore apply.

Suitable for ages 10 and above.

**EVENT**

# A.I. READY@SC



## A.I. YOU READY? GALLERY TRAIL @ SCS

Artificial Intelligence (A.I.) includes the creation of intelligent machines that think and learn like humans. But are these smart machines comparable to the human brain? Take a walk with us down our gallery trail to learn more.

**DATE**

**1 - 8 SEP**

**LOCATION**

**SCIENCE CENTRE  
PLAYMAKER STUDIO,  
KIDSSTOP  
15 SCIENCE CENTRE RD,  
SINGAPORE, 609081**

**TIME**

*Every Thursday and  
Sunday: 3pm - 4pm*

**FEES**

**FREE PASS**

\*Admission fees to KidsSTOP apply.

Suitable for children ages 4 - 6 yrs old



## CODE-A-PILLAR

Code-a-pillar is tech-enabled toy that encourages experimentation among pre-schoolers, while also developing important problem solving and critical thinking skills. Little learners are inspired to become big thinkers, so bring your little ones along for some fun and games!

DATE

1 - 8 SEP

LOCATION

SCIENCE CENTRE  
DEMONSTRATION CORNER  
15 SCIENCE CENTRE RD,  
SINGAPORE, 609081

TIME

Daily: 10.30am - 12.30pm  
2.30pm - 5.30pm

FEES

**FREE PASS\***

\*Admission fees to  
Science Centre  
Singapore apply.

Suitable for all ages.

EVENT

# A.I. READY@SC



## A.I. EXPERIENCE

Interact with our A.I. 'machine' and teach it to respond to your actions, or channel your inner Picasso in a drawing game and find out if machines truly can learn.

DATE

5 - 6 SEP

LOCATION

SCIENCE CENTRE, DDS LAB  
15 SCIENCE CENTRE RD,  
SINGAPORE, 609081

TIME

5 Sep: 10.30am - 12.30pm  
6 Sep: 10.30am - 12.30pm

FEES

**FREE PASS\***

Sign up at [regonline.sg/ssfAIworkshop](http://regonline.sg/ssfAIworkshop)

\*Admission fees to  
Science Centre  
Singapore apply.

Suitable for children  
ages 10 - 14 yrs old.



## AN INTRODUCTION TO ARTIFICIAL INTELLIGENCE WORKSHOP

It doesn't take a Computer Scientist to understand A.I., just someone who's curious. During this workshop, students are invited to leverage IBM's Watson platform to create their own A.I. applications.

DATE

7 - 8 SEP

LOCATION

FUSIONOPOLIS ONE ATRIUM  
1 FUSIONOPOLIS WAY,  
SINGAPORE, 138632

TIME

11am - 6pm

FEES

FREE PASS

Suitable for all ages.

EVENT

# X-PERIMENT!



## X-PERIMENT! @ ONE-NORTH FESTIVAL

X-Periment! is a carnival of engaging activities where you can test and try the latest innovations in A.I. across health, medicine, technology and more! Featuring cutting edge innovations, it's a festival of fun for the whole family. More than 25 partners will be showcasing their latest in STEM innovation this year.

DATE

7 - 8 SEP

LOCATION

FUSIONOPOLIS ONE ATRIUM  
1 FUSIONOPOLIS WAY,  
SINGAPORE, 138632

TIME

7 Sep: 12pm, 4pm, 5pm

8 Sep: 11am, 12pm, 4pm, 5pm

FEES

FREE PASS

Suitable for all ages.



## PAINTING WITH LIGHT

Who said you need a paintbrush to paint? With the help of science and light photography, you can now draw your favourite doodles using just a light bulb. Come down with a bright imagination and show us what you're made of.



DATE

7 - 8 SEP

LOCATION

FUSIONOPOLIS ONE ATRIUM  
GENEXIS THEATRE  
1 FUSIONOPOLIS WAY,  
SINGAPORE, 138632

TIME

11pm - 6pm

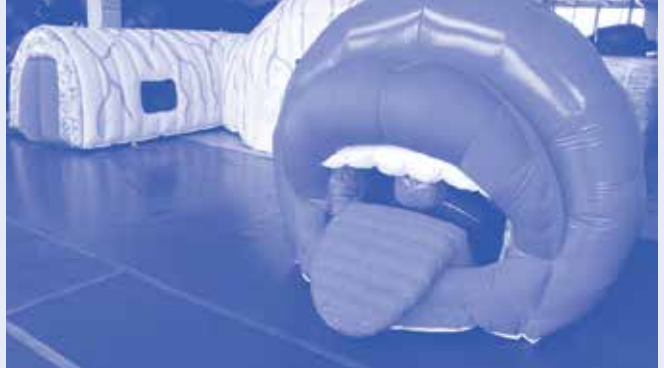
FEES

FREE PASS

Suitable for all ages.

EVENT

# X-PERIMENT!



## INFLATABLE DIGESTIVE SYSTEM

Journey through our giant, inflatable digestive track and learn how the human body converts food into basic nutrients and energy. It's an educational exhibit for the whole family, so drop by for a taste.

# LEARN

STAR  
LECTURE 2018 9

WORKSHOPS 10-11

SCIENCE SHOWS 12

CONTINUING  
PROFESSIONAL  
DEVELOPMENT  
TEACHERS '  
WORKSHOP 13

TALKS 14-16

**DATE****23 - 24 AUG****LOCATION****MEDIACORP CAMPUS  
1 STARS AVENUE  
SINGAPORE, 138507****TIME****23 Aug: 9am - 1pm****23 Aug: 2pm - 5.30pm****24 Aug: 2pm - 5.30pm****FEES****Regular - \$10**

Register at

[www.regonline.com/  
starlecture2018](http://www.regonline.com/starlecture2018)Suitable for ages 13  
and above.**EVENT****STAR LECTURE 2018****THE LANGUAGE OF LIFE BY PROF. SOPHIE SCOTT**

Prof. Sophie Scott explores the remarkable instrument that is the human voice, and runs live experiments to crack some of the biggest puzzles in science. Join us as we embark on a fascinating journey on the fundamentals of life.

DATE  
**27 AUG**

LOCATION  
**SMU, SCHOOL OF ACCOUNTANCY  
CLASSROOM 2.1  
81 VICTORIA ST,  
SINGAPORE, 188065**

TIME  
2pm – 3pm

FEES  
**FREE PASS**  
Register at [www.ssf18-ARgaming.peatix.com](http://www.ssf18-ARgaming.peatix.com)

Suitable for all ages.  
Children below 12 need to be accompanied by an adult.

EVENT

# WORKSHOPS



## AR GAMING BY HADO SINGAPORE

Do you know the difference between AR and VR? Join us for a workshop where HADO explores AR for gaming, and its unique combination of motion sensor, smartphone and sports to create a brand new experience called Techno Sports. You need to experience it to believe it.

DATE  
**2 SEP**

LOCATION  
**SMU, SCHOOL OF ACCOUNTANCY  
CLASSROOM 2.1  
81 VICTORIA ST,  
SINGAPORE, 188065**

TIME  
1pm – 3pm

FEES  
**FREE PASS**  
Register at [www.ssf18stopmotionanimation.peatix.com](http://www.ssf18stopmotionanimation.peatix.com)

Suitable for all ages.  
Children below 12 need to be accompanied by an adult.



## STOPMOTION ANIMATION BY FINDING PICTURES

Thinking of pursuing a career in film? Learn about the basics of stop motion animation using just a few simple props and a camera phone. With the help of industry professionals, you can also produce your own short animated clips and share them in a screening session.

DATE  
**2 SEP**

LOCATION  
**SMU, SCHOOL OF ACCOUNTANCY  
CLASSROOM 2.1  
81 VICTORIA ST,  
SINGAPORE, 188065**

TIME  
4pm – 5.30pm

FEES  
**FREE PASS**  
Register at [www.ssf18stopmotionanimation.peatix.com](http://www.ssf18stopmotionanimation.peatix.com)

Suitable for ages 12 and above.

EVENT

# WORKSHOPS



## THE FUTURE OF ARTIFICIAL INTELLIGENCE

New AI applications in computer vision and natural language processing have emerged in recent years, bringing about advanced intelligence in computers equivalent to or better than human beings. Learn more about the scientific understandings of the human brain and AI architecture in this workshop hosted by YITU Technology.

DATE  
**2 SEP**

LOCATION  
**SMU, SCHOOL OF ACCOUNTANCY  
CLASSROOM 2.1  
81 VICTORIA ST,  
SINGAPORE, 188065**

TIME  
4pm – 6pm

FEES  
**FREE PASS**  
Register at [www.ssf2018-vrworkshop.peatix.com](http://www.ssf2018-vrworkshop.peatix.com)

Suitable for ages 12 and above.



## IMMERSIVE VR STORYTELLING BY HIVERLABS

From Virtual Reality to Augmented Reality and even Mixed Reality, A.I. has changed the way we experience the world. Hiverlabs is hosting a hands-on workshop that will take you through their proprietary platform to create immersive experiences.

DATE

3 & 4 SEP

LOCATION

SCIENCE CENTRE  
MAXWELL AUDITORIUM  
15 SCIENCE CENTRE RD,  
SINGAPORE, 609081

TIME

11.30am & 4pm

FEES

**FREE PASS**

\*Admission fees to  
Science Centre apply.

Suitable for all ages.

EVENT

# SCIENCE SHOWS



## ENERGY LIVE! SCIENCE SHOW

Don't miss the chance to see energy in action! From flaming butane bubbles to exploding tin cans, witness fiery and perhaps even explosive demonstrations of what energy is and how it affects our lives.

DATE

31 AUG - 1 SEP

LOCATION

PLAZA SINGAPURA  
OUTDOOR PLAZA  
68 ORCHARD ROAD  
SINGAPORE, 238839

TIME

31 Aug: 3pm  
& 5.30pm (Bilingual)  
1 Sep: 3.30pm  
& 5.30pm (Bilingual)

FEES

**FREE PASS**

Suitable for all ages.



## “INCREDIBLE EDIBLES, THE CHEMISTRY OF COOKIES” BY KATE MULCAHY

Ever wondered why some cookies taste so delicious? Deep dive into the chemistry of cookies with scientist Kate Mulcahy and explore the role of every ingredient that creates a delicious cookie. Perfect for all those with a sweet tooth!

DATE

5 - 6 SEP

LOCATION

SCIENCE CENTRE  
15 SCIENCE CENTRE RD,  
SINGAPORE, 609081

LOCATION & TIME

PAULING LAB

5 Sep: 9am - 11am

FARADAY LAB

6 Sep: 9am - 11am

FEEES

FREE PASS

Register at  
[upstream@science.edu.sg](mailto:upstream@science.edu.sg)

Suitable for industry  
academics.

EVENT

# CONTINUING PROFESSIONAL DEVELOPMENT TEACHERS' WORKSHOP



## CONTINUING PROFESSIONAL DEVELOPMENT TEACHERS' WORKSHOP BY ROYAL INSTITUTION

In a workshop specially designed for teachers and working professionals, the Royal Institution's science presenters will demonstrate the do's and don'ts of engaging students with science in an effort to encourage continuous learning.

DATE  
**18 AUG**

LOCATION  
**NUS  
SEMINAR ROOM 2,  
S2-0415  
SINGAPORE, 117558**

TIME  
10am - 12pm

FEES  
**FREE PASS**  
Register with  
reena@nus.edu.sg

Suitable for ages 14  
and above

EVENT  
**TALKS**



**“MECHANOBIOLOGY - HOW DO SMALL CELLS  
CREATE LARGE LIVING CREATURES” BY  
PROF. MICHAEL SHEETZ**

Join Prof. Michael Sheetz, the Founding Director of the Mechanobiology Institute at NUS, and the pioneer of mechanobiology, in a bid to understand how forces and growth at the cellular level are created and controlled to shape the organism.

DATE  
**20 AUG**

LOCATION  
**NUS  
CONFERENCE ROOM 1  
BLK S3 LEVEL 5,  
SCIENCE DRIVE 4  
SINGAPORE, 117558**

TIME  
3pm - 4.30pm

FEES  
**FREE PASS**  
Register with  
reena@nus.edu.sg

Suitable for ages 14  
and above



**GOBY AND SHRIMP SYMBIOSES: MORE THAN  
MEETS THE EYE BY PROF. ZEEHAN JAAFAR**

Prof. Zeehan Jafaar unearths new discoveries in marine biology. He'll take a closer look at the mutually-beneficial symbiotic association between the Watchman Goby and Snapping Shrimp because its corresponding behavioral responses is much more than meets the eye.



DATE

21 AUG

LOCATION

NUS

CONFERENCE ROOM 1

BLK S3 LEVEL 5, SCIENCE

DRIVE 4

SINGAPORE, 117558

TIME

3pm - 4.30pm

FEES

**FREE PASS**

Register with  
reena@nus.edu.sg

Suitable for ages 14  
and above

EVENT

# TALKS



## “SEASONAL CHANGES IN SEXUAL ORNAMENTS AND SEXUAL BEHAVIORS IN BUTTERFLIES” BY PROF. ANTONIO MONTEIRO

If Darwin’s Theory of Evolution interests you, you don’t want to miss this! Prof. Antonio Monterio will explain key ideas before diving into his own research on how some butterflies use their colour patterns to attract the opposite sex.

DATE

24 AUG

LOCATION

NUS

SEMINAR ROOM 2,

S2-0415

SINGAPORE, 117558

TIME

4.30pm - 6pm

FEES

**FREE PASS**

Register with  
reena@nus.edu.sg

Suitable for ages 14  
and above



## “PROMOTING COEXISTENCE BETWEEN HUMANS AND WILDLIFE IN SINGAPORE: LESSONS FROM CIVET RESEARCH AND WILDLIFE MANAGEMENT STRATEGIES IN SINGAPORE” BY MS. XU WEITING

Due to urbanisation, Singapore has lost up to 80% of the mammal species. Do we still have wildlife left on our little red dot? Participate in a discussion and learn about the ongoing outreach efforts that can make a difference.

DATE

1 SEP

LOCATION

NUS

SEMINAR ROOM 2,  
S2-0415  
SINGAPORE, 117558

TIME

11am - 1pm

FEES

**FREE PASS**

Register with  
reena@nus.edu.sg

Suitable for ages 14  
and above

EVENT

# TALKS



## “BLUE IS THE WARMEST COLOUR” BY PROF. VINOD KUMAR

Dive into the world of colour and its impact on animals as Prof. Vinod Kumar talks about the evolution of structural colour producing nanostructure in animals, and the crucial role these hues play.

DATE

8 SEP

LOCATION

NUS

SEMINAR ROOM 2,  
S2-0415  
SINGAPORE, 117558

TIME

11am - 1pm

FEES

**FREE PASS**

Register with  
reena@nus.edu.sg

Suitable for ages 14  
and above.



## “CONSERVATION GENOMICS IN THE FIGHT AGAINST THE EARTH’S SIXTH EXTINCTION CRISIS” BY FRANK R

Can conservation genomics, based on population-genetic and phylogenetic methods, help spearhead our fight against extinction? Learn about the results in Southeast Asia.

# ENGAGE

SCI-FI MOVIE  
SCREENING  
AND FORUM 18

SCIENCE BUSKERS  
FESTIVAL 19

DATE

28 - 29 AUG

EVENT

# SCI-FI MOVIE SCREENING AND FORUM

LOCATION

SMU SCHOOL OF LAW  
SR2.04  
81 VICTORIA ST,  
SINGAPORE, 188065

TIME

29 Aug: 3pm - 5pm  
(Super 8)

28 Aug: 3pm - 5pm  
(Transcendence)

FEES

**FREE PASS FOR SCHOOL  
BOOKINGS ONLY**

Register at  
[upstream@science.edu.sg](mailto:upstream@science.edu.sg)

Suitable for ages 13  
and above.



For the fans of Sci-Fi movies who are looking to discuss all things Sci-Fi, join us in an afternoon of movie screening, and dive deeper into the concepts and reality of what is portrayed in a forum discussion after the show.

**DATE**

**31 AUG - 1 SEP**

**EVENT**

# SCIENCE BUSKERS FESTIVAL

**LOCATION**

**PLAZA SINGAPURA,  
OUTDOOR PLAZA  
68 ORCHARD ROAD  
SINGAPORE, 238839**

**TIME**

**31 Aug: 12pm - 6pm  
1 Sep: 9am - 6pm**

**FEES**

**FREE PASS**

Suitable for all ages.



## SCIENCE BUSKERS FESTIVAL GRAND FINALS

A highlight of SSF 2018, the Grand Final of the Science Buskers Festival gives buskers a platform to inspire an interest in science through their creative “show-and-tell”. Come down and show your support!

# PROCESS

NATIONAL  
SCIENCE  
CHALLENGE 21

A\*STAR-ESSEC  
SCIENCE  
COMMUNICATORS'  
CHALLENGE 22

**DATE**

**21 AUG - 25 SEP**

**EVENT**

# **NATIONAL SCIENCE CHALLENGE**

**TELEVISION BROADCAST**

Every Tuesday from 21 Aug to 25 Sep on Mediacorp Channel 5

**TIME**

7.30pm

**ONLINE STREAMING**

Available on [tv.toggle.sg](http://tv.toggle.sg)

Suitable for ages 13 and above



In its 15<sup>th</sup> season, The National Science Challenge (NSC) is on a search for the brightest young minds in Singapore. Are you game enough for science? Tune in and marvel at students putting their skills to the test.

**DATE**

**7 SEP - 8 SEP**

**EVENT**

# **A\*STAR-ESSEC SCIENCE COMMUNICATORS' CHALLENGE**

**LOCATION**

**FUSIONOPOLIS**

**1 FUSIONOPOLIS WAY,  
SINGAPORE, 138632**

**TIME**

**10am - 5pm**

**FEES**

**FREE PASS**

<http://www.competitions.onenorthfestival.sg/submissions/>

**TERTIARY CATEGORY**

Suitable for full time students aged 17 and above as of 31 December 2018

**A\*STAR SCIENTIST  
CATEGORY**

Suitable for all researchers working at A\*STAR as of 8 September 2018



Judged by Dr. Abhi Veerakumarasivam and other esteem researchers, the first A\*STAR-ESSEC Science Communicators Challenge aims to grow a stronger science and technology presence in Singapore by encouraging public conversations around science which improves society and betters our lives.

Two competition categories, comprising students and A\*STAR scientists, participate in a battle of words and wit through a 3-minute presentation on a scientific topic of their choice.