

★ 2016 ★
PROGRAMME

FREE EVENT!

IMPERIAL FESTIVAL

SAT 7 MAY 12.00–18.00  SUN 8 MAY 12.00–17.00



Imperial College
London

⊖ South Kensington

Exhibition Road • London SW7 2AZ

Welcome to the 2016 Imperial Festival!



Check out the full Festival
programme online:

→ [www.imperial.ac.uk/
festival/whats-on](http://www.imperial.ac.uk/festival/whats-on)

**Whether you are new to
the Festival and the College,
or returning for the fifth year
in a row, we welcome you to
the 2016 Imperial Festival.**

If you've ever wondered if you can outsmart a robot, what your pee says about you, or whether music makes you healthy, then we have the festival for you. Hundreds of researchers have brought their work out of the lab to share with you, so take advantage of this unique opportunity to question and debate with some of the world's leading scientists and engineers.

Take a look at the home of the future or revisit the cars of the past in our new Futures and Transport Zones, or perhaps start by visiting Festival favourite the Robot Zone.

As ever, there are street performers, musicians and dancers along with an array of street-food and our popular pop-up pub, the Haemo Globe Inn.

We would like to thank all the students, staff and alumni who have put endless creativity, enthusiasm and time into creating the activities you see here today, as well as our Exhibition Road neighbours.



FIND US:

🐦 #impfest
📘 imperialfestival
📷 #impfest

LET US KNOW WHAT YOU THINK

We would love to hear from you! Help shape the 2017 Imperial Festival by completing the Festival survey online or at the Info Tent.

[www.imperial.ac.uk/
festival/feedback](http://www.imperial.ac.uk/festival/feedback)

Photography and filming

Please be aware that the Imperial Festival may be photographed, filmed or otherwise recorded, and that by attending this event you consent to this material being used for College publicity purposes, through whatever media, worldwide.

If you do not wish to consent, please pick up a red sticker from the Info Tent and wear it prominently. Imperial College London reserves the right to refuse entry or eject participants.

Behind the scenes

Head behind the scenes and get a glimpse of some of Imperial's most exciting labs by signing up for tours, which leave on the hour. Places are limited, and will be released 30 minutes before each tour.

📍 **SIGN UP AT THE INFO TENT**

TOURS AVAILABLE

- Sit under the stars and travel the Universe in our pop-up **Planetarium**
- Discover new ways of seeing the world at the **KPMG Data Observatory**
- Tour our **Cancer Research UK** facilities, helping us to beat cancer sooner
- Visit the futuristic **Carbon Capture Pilot Plant** in the heart of London (Saturday only)
- See how food waste is turned into compost at our unique composter the **CompPod**



Workshops

📍 WORKSHOP TENT

→ **Sat 12.00**

ZOOLAB

Get hands on with our cuddly and slithery friends as we enter the animal kingdom.

→ **Sat 14.00**

G-ASTRONOMY

Explore astrophysics through cosmic cocktails and multiverse profiteroles.

→ **Sat 16.00**

LEVEL UP HUMAN

Join the recording of this light-hearted podcast looking at what it means to be human, and what the alternatives might be.

→ **Sun 12.30**

21ST CENTURY BIOCHALLENGE

Take on our mini biochemistry activities to make pipe-cleaner painkillers and play a game of stem cell snap.

→ **Sun 14.30**

THE FUTURE OF PARALYMPIC SPORT

Use your creative skills to design new inclusive sports for people of all physical abilities.



Talks

 **G16, SAF BUILDING**

All talks last 30 minutes followed by 10 minutes of Q & A. Seats are allocated on a first-come first-served basis.

SATURDAY 7 MAY

→ 12.00

CANCER, IS IT REALLY ALL BAD LUCK?

Professor Elio Riboli

Recent media reports suggested cancer might all just be bad luck, but is this really true? Find out how Imperial's public health research is testing this theory.

→ 13.00

FLYING ANIMALS AND ROBOTS

Professor Holger Krapp and Dr Mirko Kovac

Hear how animals learned to fly and how the way birds and insects evolved is influencing engineers working on drones, jet fighters and flying robots.



→ 14.00

MOORE'S LAW MEETS MURPHY'S LAW IN FINANCIAL MARKETS

Dr Andrei Kirilenko

Faster, cheaper computers, greater connectivity and sophisticated trading algorithms have transformed global financial markets. But trading this way can have unintended consequences. Explore technology versus stability in financial trading.

→ 15.00

BUILDING THE BIOECONOMY

Professor Paul Freemont

Synthetic biology has been vaunted as a revolutionary technology for economic growth and scientific discovery. But how is it being used, and who will reap the benefits?

→ 16.00

TO INFINITY AND BEYOND

Dr Dave Clements and Dr Roberto Trotta

Art imitates life, but does life imitate art? A panel of eminent scientists and sci-fi writers explore how ideas from fiction today might manifest into products, designs and research of the future.

→ 17.00

PSYCHEDELIC SCIENCE

Dr Robin Carhart-Harris

Brain research using magic mushrooms and LSD could lead to new treatments for depression and other mental health problems. Discover images that show how psychedelic drugs affect the brain.

MEET THE SCIENCE AUTHORS

 **G34, SAF BUILDING**

→ 13.00

Aurora

Join alumnus **Dr Melanie Windridge** in her search for the Northern Lights.

→ 14.30

Disturbing the Universe

Astrophysicist **Dr Dave Clements** explains the inspiration behind his science fiction stories.

→ 16.00

Herding Hemingway's cats

Explore how our genes work with author **Kat Arney** and alumnus and science comedian **Helen Arney**.

These talks are produced in collaboration with Friends of Imperial.

Talks

📍 G16,
SAF BUILDING

SUNDAY 8 MAY

→ **13.00**
**ITALY'S DRAMATIC
SCENERY, EARTHQUAKES
AND VOLCANOES**

Dr Lidia Loneragan

Take a journey across Italy with a new pair of eyes to understand how the geology of the country has inspired art, architecture and sculpture across civilisations and through history.

→ **15.00**
**BLAST INJURIES: A
CLINICAL PROBLEM, AN
ENGINEERING SOLUTION**

Dr Hari Arora and Squadron Leaders Claire Webster and Phill Pearce

Find out how researchers from Imperial's Centre for Blast Injury Studies are finding innovative ways of mitigating the effect of explosions and improving treatments for patients.

→ **16.00**
**CHINA'S NEXT
STRATEGIC ADVANTAGE**

Professor George Yip

Learn how China's enormous market and business environment is moving from imitation to innovation, and how foreign companies could participate and learn from their approach.



ALUMNI WEEKEND at the IMPERIAL FESTIVAL

A very warm welcome
to everyone attending
the Alumni Weekend.
We are excited to have
so many of our alumni
back on campus.



MAKE THE MOST OF YOUR VISIT

→ **Sat 09.30–17.30,
Sun 10.30–16.30**

Imperial graduates can visit us in the Alumni Zone throughout the Weekend to escape the crowds, enjoy free refreshments, collect a goody bag, access a variety of campus tours, and explore the Alumni Showcase.

→ **Sat 10.00–12.00**

Discover the Festival's Research, Explore, Futures and Energy and Environment Zones before the Festival opens to the public in exclusive alumni-only previews.

→ **Sat 17.30 onwards**

Join us at the Union Bar in Beit Quad – your first drink is on us if you have registered for the Alumni Weekend.

Share your stories, memories and photos of the Weekend using **#OurImperial** on Twitter, Instagram and Facebook. Email your photos and comments to alumni@imperial.ac.uk or add them to our display in the Alumni Zone.



Are you an Imperial alumnus but NOT YET REGISTERED?
Visit us in the Alumni Zone.

📍 RESEARCH ZONE

Explore 40 interactive stands under our big white tent including chances to make art with fat, find out what your pee says about you, and play noughts and crosses with lasers.

📍 ROBOT ZONE

Where robots and computers merge to create the artificial intelligence of the future. Meet drones that see like insects, watch an eye-controlled wheelchair play sport and design your own robot computer game.

📍 FUTURES ZONE

Take a journey around the home, hospital and farm of the future with Imperial's staff, student and alumni entrepreneurs who are building tomorrow's technology with today's research.

📍 ENERGY AND ENVIRONMENT ZONE

Discover research from around the College that aims to understand and address climate change and other environmental concerns of our time.

📍 TRANSPORT ZONE

Mark the 120th anniversary of the original Horseless Carriage Show with vintage cars from the turn of the 20th century, and discover what cars of the future could look like.



📍 SUPERBUGS ZONE

Journey into the tiny world of bacteria, and the micro-organisms that share our home and bodies, before exploring the research aiming to reduce their threat to our health.

📍 HEALTH AND WELLBEING ZONE

Explore what it means to be a patient today, from how modern disease spreads to what you can do to stay healthy.

📍 CONTEMPLATION ZONE

Take time out from the busier areas of the Festival to discuss and reflect on what you've seen with a series of exhibits to stimulate the senses.

📍 EXPLORE ZONE

Get hands-on in the Wohl Reach Out Lab and Activity Tent where the whole family can play and get involved with science and engineering activities, from making jelly worms to learning how to observe meteorite showers.

📍 ALUMNI ZONE

An exclusive area dedicated to Imperial alumni. Connect with fellow graduates over free refreshments, sign up for alumni-only tours, chat with Imperial's aspiring entrepreneurs and make some more Imperial-inspired memories.

Schedule



→ Look out for pop-up performances throughout the Festival weekend

SATURDAY 7 MAY

	MUSIC TENT	DANCE TENT	WORKSHOP TENT	G16, SAF BUILDING	G34, SAF BUILDING
12.00			👋 Zoolab	📺 Cancer, is it really all bad luck?	
12.30					
13.00		👋 Meet the characters		📺 Flying animals and robots	📺 Aurora
13.30	🎵 Imperial College Big Band				
14.00		💃 Bellydance	👋 g- Astronomy	📺 Moore's law meets Murphy's law	
14.30	🎵 Jonny Berliner				📺 Disturbing the Universe
15.00		👋 Interactive energy		📺 Building the bio-economy	
15.30	🎵 State of Nature				
16.00		💃 Jazz dance class	👋 Level up human	📺 To infinity and beyond	📺 Herding Hemingway's cats
16.30	🎵 Techtonics				
17.00		👋 Meet the characters		📺 Psychedelic Science	
17.30	🎵 Jonny Berliner				

SUNDAY 8 MAY

	MUSIC TENT	DANCE TENT	WORKSHOP TENT	G16, SAF BUILDING	ROBOT ZONE
12.00					
12.30	🎵 Animaviva		👋 21st century bio-challenge		📺 Action Potential
13.00		👋 Meet the characters		📺 Italy's dramatic scenery	
13.30	🎵 The Scopes				
14.00	🎵 Jonny Berliner (starts 14.15)	💃 Salsa dance class			📺 Action Potential
14.30			👋 The future of Paralympic sport		
15.00	🎵 Chamber Choir			📺 Blast injuries	
15.30					
16.00	🎵 Imperielles	👋 Meet the characters		📺 China's next strategic advantage	📺 Action Potential
16.30	🎵 Jonny Berliner				

KEY

- 🗣️ Talks
- 👋 Hands-on activities
- 🎵 Music
- 💃 Dance
- 👋 Family
- 📺 Performances

Create your personalised schedule with our online programme:
→ www.imperial.ac.uk/festival/whats-on

LIMITED
EDITION



Take home your
Festival 2016 t-shirt
today – only available
from the Info Tent



Hungry for more?

If you've enjoyed the Festival, be sure to visit us again.

UPCOMING EVENTS

Stay up to speed with Imperial's latest research through our programme of public events, which runs throughout the year.

→ www.imperial.ac.uk/whats-on

CATCH UP ONLINE

If you can't make it to our lectures, many of them are live-streamed. You can also delve into our archive of talks and films online:

→ www.imperial.ac.uk/be-inspired



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