

BOOKING REQUEST FORM						
	£	£	No. at	No. at	Total	
	Adult	Con.	adult	concess.	£	p
Sub-total from previous page	-	-	-	-		
Tuesday 6 September						
Pulsars to Porridge	£4	£2				
Mouths of Ewes and Heifers	£4	£2				
Ancient Stones and Comets	£4	£2				
Mathematics of the Neolithic	£4	£2				
From out of the Fire	£4	£2				
Particles Way Beyond	£4	£2				
Genes, Diet, Health	£4	£2				
Farming Gin and Vodka	£8	-				
Arcs & Sparks - the Musical!	£4	£2				
100 Years Underwater	£4	£2				
Wednesday 7 September						
Miniature Whisky School	£12	-				
What Can We Eat?	£4	£2				
The Missing Stuff	£4	£2				
James Petrie Chalmers	£4	£2				
Distilling - Theory and Practice	£6	£4				
The World in a Wave	£4	£2				
The Beautiful Equations	£4	£2				
Big Beautiful Bubble Show	£4	£2				
Distilling the Biofuture	£4	£2				
The Highland Park Ceilidh	£8	-				
(children with parents)	-	£4				
LecturePass - all £4 talks £32 £24						
(Please note that admission can only be guaranteed if pass-holders arrive at least 15 mins before start)						
Total ticket sum enclosed						
Name						
Address						
Telephone						
Email						
<input type="checkbox"/>	Please send me information on travel to Orkney & accommodation					
	Please complete in BLOCK CAPITALS , post with remittance & s.a.e. to Orkney Science Festival VisitScotland, Tourist Office, Kirkwall, Orkney, KW15 1GU Please make cheques payable to Orkney Science Festival Ltd					
	Where no ticket or booking details are entered, or admission is free, advance booking is not necessary. If capacity is limited, you may need to arrive in good time to ensure a place.					
	Our phone is 01343 540844, our e-mail orkneyscience@gmail.com Book online and get updates at www.oisf.org Follow us on Facebook and Twitter @OrkSciFest!					

Monday 5 September

10.00 am - 12.00 *William Shearer's, Victoria St, Kirkwall*
HONEY & HERB WORKSHOP
Ethnobotanical researcher Anna Canning describes traditional uses of honey's antibacterial properties and shows how to combine it with herbs and kitchen-cupboard ingredients for skin care today.

10.00 - 11.00 am *Pickaquoy Centre, Kirkwall*
A FAREWELL TO ICE
Prof. Peter Wadhams of Cambridge University, the world's leading expert on sea ice, brings the latest research from the Arctic Ocean - showing change is occurring much faster than previously predicted.

11.30 am - 12.30 pm *Pickaquoy Centre, Kirkwall*
THE SKY ALL TORN, AND FLYING SPINDRIFT
Dr Maria Pia Casarini of the Silvio Zavatti Polar Research Institute describes the rescue of the Shackleton expedition on 30 August 1916. With their ship *Endurance* crushed by pack ice, Shackleton sought help from South Georgia, through icy storms and mountainous seas.

One O'Clock Toast at the Peedie Kirk: James Petrie Chalmers, pioneer of cinema, by Moya McDonald

2.00 - 3.00 pm *Town Hall, Kirkwall*
ICE LAND TO JUTLAND
Ice fatally delayed the *Terra Nova's* efforts to bring supplies to Scott in the Antarctic. Arriving home, the crew's lives were changed by war - with some at the battle of Jutland. Writer Anne Strathie tells their story.

3.30 - 4.30 pm *Town Hall, Kirkwall*
THE MINE, THE STORM, THE MESSAGE ON THE SHORE
Could the messages of the *Hampshire's* loss have been passed on better? Prof. Tom Stevenson looks at communication systems of the time, on sea and shore, with Sandy Firth of Orkney Wireless Museum and Dorothy Brankin of the Museum of Communication.

5.15 - 6.15 pm *Town Hall, Kirkwall*
THE ORIGIN OF COMETS
Prof. Mark Bailey, Emeritus Director of Armagh Observatory, tells the story of the discovery and search for comets in the dark outskirts of our planetary system, and the central role they play in current theories of our solar system.

7.30 - 8.30 pm *King Street Halls, Kirkwall*
A MESSAGE OF A MILLION YEARS
A 1.2 million-year-old human jawbone from a Spanish cave shows Europe was inhabited much earlier than was thought, with the first Europeans coming from Asia. Dr Maria Martínón-Torres of University College London describes her discovery and its remarkable implications.

9.00 - 10.00 pm *King Street Halls, Kirkwall*
THE PEOPLE OF THE BRITISH ISLES
The most detailed genetic map of any country in the world has been produced by a project funded by the Wellcome Trust. Sir Walter Bodmer from Oxford University, who conceived it and led it, outlines the results - and the findings for Orkney.

9 - 11 pm Meet up at the Festival Club at The Reel

Tuesday 6 September

10.00 am - 12.00 *William Shearer's, Victoria St, Kirkwall*
PULSARS TO PORRIDGE
World Porridge Making Champion Dr Simon Rookyard shows how to make a perfect pot of porridge, and along the way tells Liz Ashworth about his work in radio astronomy at Jodrell Bank.

10.00 - 11.00 am *Pickaquoy Centre, Kirkwall*
The John D. Mackay Memorial Lecture
FROM THE MOUTHS OF EWES AND HEIFERS
Dr Ingrid Mainland of the UHI Archaeology Institute, Orkney College UHI, shows how analysis of animal teeth from ancient sites gives clues to early farming in Orkney and elsewhere in Iron Age and Norse times.

11.30 am - 12.30 pm *Pickaquoy Centre, Kirkwall*
ANCIENT STONES AND COMETS
Prof. Mark Bailey outlines evidence for the arrival of a giant comet around 20,000 years ago. Could its later reappearances have been a motive for ancient societies to erect astronomically-linked stones?

The One O'Clock Toast at the Peedie Kirk today: writer Eric Linklater, by Dr Ragnhiid Ljosland

2.00 - 3.00 pm *Town Hall, Kirkwall*
THE MATHEMATICS OF THE NEOLITHIC
Ancient stone circles were built in mathematical patterns, sky-aligned - but why? Howie Firth follows an old idea: of the universe as alive.

3.30 - 4.30 pm *Town Hall, Kirkwall*
FROM OUT OF THE FIRE
It took several hundred thousand years for the blazing sea of energy from the Big Bang to cool enough for the first particles of matter to form. Dr Arjun Berera of Edinburgh University describes the process.

5.15 - 6.15 pm *Town Hall, Kirkwall*
PARTICLES WAY BEYOND
Finding the Higgs particle neatly supports existing theory. But hints have come from CERN of something else that may not quite fit - as Dr Victoria Martin of Edinburgh University, just back from CERN, explains.

5.15 - 6.15 pm *King Street Halls, Kirkwall*
The Grimond Lecture
GENES, DIET, HEALTH
The interactions between genes and diet are the key to various diseases, disorders, and food intolerances, says Prof. Jun Wei of UHI's Centre for Health Science - with gut bacteria playing a vital role.

7.30 - 8.30 pm *Orkney Theatre, KGS, Kirkwall*
ARCS & SPARKS - THE MUSICAL!
Now featuring Scotland's largest musical lightning generator! An unforgettable not-to-be-missed experience for all ages. Presented by Dr Ken Skeldon, Janet Milne and team from Aberdeen University.
Supported by the IET, additional show demos supported by SUPA

7.30 - 9.00 pm *The Reel, Kirkwall*
FARMING GIN AND VODKA
Kirsty Black describes the Arbikie Highland Estate's on-farm distillery, with samples. Over-18s only. Tickets £8. *Organised by the IBD*

9.00 - 10.00 pm *Orkney Theatre, KGS, Kirkwall*
100 YEARS UNDERWATER
Expedition organiser Emily Turton shows some of the spectacular images from this spring's licensed diving expedition on HMS *Hampshire* which used the latest techniques. Andrew Hollinrake sets the scene.

9 - 11 pm Meet up at the Festival Club at The Reel

Wednesday 7 September

9.30 am - 12.30 pm *Highland Park Distillery, Kirkwall*
Miniature Whisky School: MAKING MALT
Eric Walker, Marie Stanton and Dr Tim Dolan provide expert insight on the malting process and the conditions that affect the end product. Over-18s only, booking essential. Tickets £12. *Organised by the IBD*

10.00 - 11.00 am *Town Hall, Kirkwall*
WHAT CAN WE EAT?
Michelle Berriedale-Johnson, editor of the FoodsMatter websites, looks at causes of food allergy and intolerance and what can be done. Prof. Jun Wei and Liz Ashworth join for questions.
Sponsored by e-availability

10.00 - 11.00 am *Pickaquoy Centre, Kirkwall*
COSMOLOGY IN CRISIS
Theories of the universe's moving material are failing. Dark matter may enable the maths to work - but can we find direct evidence for it? Prof. Alex Murphy of Edinburgh University tells the story of the search.

11.30 am - 12.30 pm *Pickaquoy Centre, Kirkwall*
JAMES PETRIE CHALMERS: PIONEER OF VISION
Born 150 years ago in Tankerness, he started in the US the first-ever film trade journal, and fought for standards that laid foundations for the new cinema industry. Moya McDonald tells his story, with an early film programme from the magazine and readings by Dave Grieve.
Sponsored by Orkney Car Hire - James D Peace & Co

One O'Clock Toast at Peedie Kirk: actor and author Robert Shaw, written by Archie Bevan, read by Graham Bevan

2.00 - 5.00 pm *from Palace Road, Kirkwall*
BUS TOUR: DISTILLING - THE THEORY AND PRACTICE
Join experts from Scapa and Highland Park for special tours of both. Advance booking essential: over-18s only. Tickets £6 & £4.
Organised by the Institute of Brewing and Distilling (IBD) and sponsored by the two distilleries and Maynes Coaches

2.00 - 3.00 pm *Town Hall, Kirkwall*
THE WORLD IN A WAVE
Erwin Schrödinger developed his famous wave equation in unusual circumstances - on a Christmas holiday with a mystery woman in a Swiss mountain resort. Pippa Goldschmidt tells the story.
Supported by The Institute of Physics in Scotland

3.30 - 4.30 pm *Town Hall, Kirkwall*
THE BEAUTIFUL EQUATIONS
Maxwell's equations are the basis for today's radio, TV, phone and web links. Dr Tim Drysdale of the Open University shows how we can visualise them - thanks to a breakthrough made 50 years ago.

5.15 - 6.15 pm *Orkney Theatre, KGS, Kirkwall*
THE BIG BEAUTIFUL BUBBLE SHOW
See bubble shapes and find how to make giant colourful bubbles - and tubes! Philip Noble is a scientifically trained visual artist who has given bubble shows in over 20 countries. Something for the whole family.
Supported by The Institute of Physics in Scotland

7.30 - 8.30 pm *Supper Room, Town Hall, Kirkwall*
DISTILLING THE BIOFUTURE
By-products of whisky production can feed new bio-industries, using microalgae and renewable energy, says Prof. Alan Wolstenholme of Heriot-Watt University. Over-18s only. *Organised by the IBD*

8.00 pm - 12.00 midnight *Peedie Kirk Hall, Kirkwall*
THE HIGHLAND PARK CEILIDH
with Dave and company, Andy Munro, and Lewis Hou's fiddle and dance steps, for would-be and why-not dancers of all ages. Tickets (including light supper) £8, or £4 for children with parents.
Sponsored by Highland Park

Special food events during Festival

Daily, from Fri 2 to Wed 7. Lunches in the Peedie Kirk Hall. Soup and Orkney fare daily, £8. From 12.30 pm, with 5-minute Toast at 1 pm.

Exhibitions

FASHION THE FUTURE!
See the beautiful costumes produce by artists and designers from upcycled clothing and 3D printing, at Festival events and in the window of Age Concern Orkney, Victoria Street, Kirkwall.

JUST A LITTLE BIT OF NATURE REPEATING
Fractals in nature: Orkney schools and Orkney College artwork
Town Hall, Kirkwall *Daily except Sun, 10.30 - 5.00*

STONE ON STONE: Orkney Camera Club photographs
Pickaquoy Centre, Kirkwall *Daily except Sun*





THE REMARKABLE LIFE OF SAMUEL LAING
Orkney Library & Archive, Kirkwall *Daily except Sun, Wed*

ORKNEY WIRELESS MUSEUM
Kiln Corner, Kirkwall *Mon - Sat 10 - 4.30, Sun 2.30 - 4.30*

THE LOSS OF HMS HAMPSHIRE
Stromness Museum, Alfred Street, Stromness *Daily 10 - 5*

THE BATTLE OF JUTLAND, SCAPA FLOW & THE WAR AT SEA
Orkney Museum, Kirkwall *Mon - Sat 10.30 - 5*

Look for updates on our website www.oisf.org

ORKNEY International SCIENCE FESTIVAL

1 - 7 SEP 2016

more than 60 events

Speaking with Dolphins

Gravitational Waves

The World of the Permafrost

The Man Who Found the Herring

The Mathematics of the Neolithic

Pulsars to porridge

Ice Land to Jutland

The Cathedral Builders

Crystals



