

Seeing the Unseen

University of Surrey

17.30 – 21.00
Monday 29th October 2018



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During the evening there will be a range of activities suitable for all ages. No prior knowledge of astronomy or physics is required to enjoy any of the talks or activities listed below!

Head to the **University Hall** (HA on campus maps) for registration.

ACTIVITIES AVAILABLE ANYTIME

University Hall (HA)

Within the University Hall you will be able to travel on a journey through phenomenon which are ever more difficult to see. This will take you through many different interactive stands, where there will be researchers from our department available to talk about their research and show hands on demos of physics concepts. Your journey will end with one of the hardest things in the Universe to see, dark matter. The Craft Zone is aimed at younger visitors and gives them a chance to get hands on with some dark matter and space-themed craft activities.

Journey through the Unseen

- See yourself in infrared with our thermal camera
- Lightsabres
- See inside the human body with Medical Physics
- Weird and wonderful Quantum Physics
- Explore Nuclear Physics
- Dark matter
- And much more!

Craft Zone

- Crafts – space-themed colouring, building and word searches
- Dark matter competition

Telescope Site (T)

University of Surrey Astrophysics department, Surrey Space Centre, Physoc Society and the Guildford Astronomical Society will be on hand to help you observe the night sky (if it is clear). This will include:

- Guided constellation tours
- Telescopes pointed at different astronomical objects such as: planets, stellar clusters, galaxies and nebulae.

Refreshments (F)

A range of hot/cold food and drinks are available to purchase from the stretch tent on the PATTS field.

SCHEDULED ACTIVITIES

Planetarium Shows (P)

Start Times	
17.30 18.15 19.00 19.45 20.30	Prebooked tickets only , as the planetarium has a capacity of 30 people. Each planetarium show will start promptly and late comers will not be admitted to avoid spoiling the experience for the audience. Please arrive ready to enter the planetarium 5 minutes before the scheduled start time . Each show lasts 30 minutes.

Lectures (LTD)

Time	Speaker	Title
17.40	Dr Arnau Rios Huguet	Zombie degenerate stars: what can we learn from the stellar graveyard?
18.15	Dr Denis Erkal	Who, why, where, what is dark matter?
18.50	Prof Jeremy Allam	Extreme Light and the 2018 Nobel Prize in Physics
19.25	Richard Duke	Cleaning up Space; the Remove Debris Mission....
20.00	Dr Dan Doherty	Shining a light on direct dark matter searches
20.35	Dr Michelle Collins	Did dark matter kill the dinosaurs?

Surrey Space Centre Tours (SC)

Time	
18.00 18.45 19.30 20.15	Prebooked tickets only , as the Space Centre has a capacity of 30 people. Space centre tours will start promptly at the Main University Hall and be taken over to the Space Centre by ambassadors. Each tour lasts approx. 30 minutes.

All ages are welcome to any of our activities!

Photography is permitted. Please note that photography and videos will be taken during the evening. By attending the event, you consent for such material to be broadcast by local press or used by the University to advertise future public events. The organisers reserve the right to refuse admission to the event without reason.

With thanks to everyone involved, including: the Guildford Astronomical Society, Physoc Society, *Campaign for Dark Skies*, the Department of Physics at the University of Surrey, Surrey Space Centre, Widening Participation at University of Surrey, Royal Holloway University, Dr Mark Gallaway and SEPnet (South East Physics Network).

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HA – University Hall – Registration, interactive stands, demos & crafts, planetarium and start of the tours of the space centre.

LT – Lecture theatre block – Lectures taking place in LTD.

T – Telescope site – Telescopes and constellation tours of the night sky.

F - Stretch Tent – on the large **PATTS field** – You will be able to purchase hot/cold food and drinks.



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<http://www.surrey.ac.uk/department-physics/outreach-community>