



SAS Lectures/Talks - Speaker List for 2018/2019

No.	Date	Time	Lecture / Talk Title	Speaker	Society/ Organisation/ affiliation	Video Lecture /Talk ¹ (Y/N)	Trans- port Reqd. (Y/N)	Abstract / Talk outline
1	16th September 2018	7 pm	In Search of Extra-terrestrials	Dave Newton	SAS President	Y	N	In this talk Society President Dave Newton will outline his thoughts on the search for extraterrestrial life, touching upon his lifelong fascination with Outer Space and his own involvement with research into claims of alien encounters. Dave will assess the likelihood and possibilities for alien life, and ask the questions: Why is this important? And why, ultimately, the search for life Out There in the cosmos shines a light upon ourselves.
2	21st October 2018	7 pm	Setting up your Telescope	Dr Jurgen Schmoll	Durham University, Centre for Advanced Instrumentation. DAS, CaDAS	Y	Y	The telescope is the most important tool for the active amateur astronomer. While there are many telescopes on the market, the techniques of using them to their full potential is something rarely explained in their user manuals. Also, the stargazer will find out quickly that the biggest telescope is

¹ Please see 'Videos of Talks' section at end of the list.

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								<p>not always the best choice due to the effort of setting it up and other factor as portability, cool-down times, maintenance, desired functions and many more.</p> <p>This presentation given by Dr Jurgen Schmoll, an amateur/professional astronomer and instrument scientist, covers the bandwidth from simple routines as finder scope alignment and simple maintenance tasks up to what can be done to make observing more frequently and joyful.</p> <p>At the other end of the spectrum it will be shown how building a full-fledged amateur observatory around the telescope makes observing more joyful.</p>
3	18th November 2018	7 pm	Earth in Space	Graham Darke	SAS Member, Ex-Chair	Y	N	<p>In this talk we look at the Earth's place within the universe and see how our understanding has changed over the centuries.</p> <p>We also examine the different methods for determining the distances to planets, stars and galaxies.</p>
4	16th December 2018	7 pm	Spectroscopy for Beginners	John Nicholl	Professional Optics & Telescope Maker	Y	N	<p>Covers the theory behind astronomical spectroscopy and the capture and analysis of spectra using a transmission diffraction grating. Aimed at beginners.</p>

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5	20th January 2019	7 pm	Astronomy for Beginners	Chris Duffy	SAS Committee Member	Y	N	<p>Astronomy for Beginners – A simplified view of the universe.</p> <p>How to start observing by finding some of the main stars and constellations.</p> <p>Understand how the stars appear to move across the sky.</p> <p>Why does what we see in the night sky change with the seasons and where does Orion go in the summer?</p> <p>What are stars and galaxies and how big is the universe.</p>
6	17th February 2019	7 pm	The promise of Gravitational Wave astronomy.	Dr Sue Bowler Editor, A&G magazine for the Royal Astronomical society (RAS)	Editor, A&G for the RAS. School of Earth and Environment University of Leeds	Y	N Travel Costs to be incurred	<p>Gravitational waves offer a new way to uncover the universe.</p> <p>General relativity suggested their existence, but even Einstein wasn't sure about them. It wasn't until the 1970s that there was evidence of their existence, but it took 40 years to be able to detect them. Now we can detect these ripples in space time, what do they tell us about black holes, neutron stars and the fundamental nature of the universe?</p> <p>There are many wonderful images (public domain) at the LIGO website https://www.ligo.caltech.edu/images</p>
7	17th March 2019	7 pm	Atmospheric turbulence and its impact on Astronomers	Timothy Butterly	Durham University, Centre for Advanced Instrumentation.	Y	?	Outline TBC.
8	21st April 2019	7 pm	DESI : the Dark Energy Spectroscopic Instrument	Dr Jurgen Schmoll	Durham Uni, DAS, CaDAS	Y	Y	The expansion history and large-scale structure of the Universe is a key prediction of cosmological models, and DESI observations will permit scientists to probe diverse aspects of cosmology, from dark

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	19th May 2019	7:pm	SAS Astrophotography Competition	SAS Chairperson	Sunderland AS	N/A	N/A	Hosted by SAS.
9	16th June 2019	7 pm	David Sinden: A Life in Optics	John Nicholl	Professional Optics & Telescope Maker	Y	N	Hartlepool born Davis Sinden was the last chief optician at the Grubb Parsons company. He went on to form his own 'Sinden Optical Company'. This talk covers his remarkable achievements in optics and telescopes.
10	21st July 2019	7 pm	Giant Impact Simulations: Why Does Uranus Spin on its Side?	Jacob Kegerreis	Durham University, Institute for Computational Cosmology	Y	Y	<p>Uranus spins on its side. With its spin axis pointing almost at right angles to those of all the other planets, the common explanation is that a proto-planet at least as large as the Earth crashed into the young planet, sending it spinning in this new direction. Giant impacts like these were common events in the early solar system and help explain many other mysteries such as the origin of the Moon, as well as features of the exoplanets we see around distant stars.</p> <p>Jacob's team runs supercomputer simulations with millions of particles</p>

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								to re-create and study these cataclysmic events. I In this talk, he will focus on our recent work with Uranus and how this violent impact might also explain the planet's extremely cold surface, strange magnetic field, and unusual satellite system.
11	18th August 2019	7 pm	Who won the space race?	David Kidd	Astronomy/Science Educator	Y	Y	The talk will be about the successes, and failures, of the Soviet Space Programme focusing on the story of Sergei Korolev and the Semyorka (seven) launcher and Soyuz spacecraft he designed which are both still in service unlike all the US Apollo hardware which has long since retired. When US astronauts go to the International Space Station in a Soyuz capsule on top of a Semyorka rocket perhaps it is appropriate to ask the question "who really won the space race?" and look again at the history of space in the 1960s.
Backup Talks (Possible Talks for current empty talk slots – if they cannot be filled)								

Location

All talks unless otherwise stated will be given on a Sunday evening for the date and time shown above in the Discovery Room at the Washington Wetlands Centre, Pattinson, Washington, Tyne and Wear, NE38 8LE.

¹Videos of Talks

This season's talk season is (September 2018 – August 2019) our society is thinking about the possibility of video recording some of our lectures and talks.

These videos recordings would be for our SAS members only and would be strictly used SAS website members only area.

However, this is entirely optional and feel under no obligation if you prefer that your talk not to video recorded.

Therefore, if you could provide an indication of your preference/non-preference for your lecture/talk to be videoed in your confirmation replies to the SAS secretary that would be helpful. This would be taken as permission to video record your lecture/talk and can be changed by speaker/sas committee at any time prior to the lecture/talk with appropriate notice.

Kit Provided

Projector will be provided for the talk.

A laptop, speakers, laser pen, etc can be provided upon request.

[Travel & location instructions.](#)