



European Astronomical Society e-Newsletter 3



EAS News

The ideal European Astronomical Society Farewell message from the EAS President



The ideal European Astronomical Society that I think astronomers in Europe and in the world need is the home of all professional astronomers on the continent, from the Azores to Kamtchatka. It is strongly present in the circles that shape science in Brussels and has a solid foot in Moscow, it provides an efficient link between the communities on the eastern and western parts of the continent. [▼ Read more](#)

It is a privileged interlocutor on the world astronomical scene. That Society publishes position papers that shape the thinking of astronomers and in the whole scientific community. It runs yearly meetings which serve to share recent observations and insights on the physics of all sorts of cosmic objects, from planets around the Sun to quasars and other high energy emitters. It shares a number of interests with the physicists for example in gravitation and cosmology. This ideal society runs the professional journal in which most research papers are published in Europe. The yearly meetings of the Society also serve as a platform on which the policies of the different actors of the community, the astronomers, but also their funding agencies and the European and national authorities, are debated and elaborated.

That Society links the astronomy students and researchers with the academic institutions and potential employers. It is also known in the professional world outside academia, where it helps industries and firms find bright colleagues wishing to exercise their talents in broad areas of society; and it supports the astronomers following paths far from universities and research organisations. That ideal Society has some 10,000 members. Most of the firms active in the building of European telescopes and instruments, be they ground or space based, and those involved in the development of software support its activities through organisational memberships. That society is run by a strong and professional staff and benefits from a sound and solid budget.

The EAS that we know today came quite some way in the direction of this ideal organisation. It was founded in the wake of the opening of the Eastern parts of the continent to international collaboration, its members come from most countries between Portugal and Russia. The EAS published some position and opinion papers, in particular one on open publishing that rings very true in the ongoing discussions. It shaped its yearly meetings, now called EWASS, so that a significant fraction of the community meets to discuss research and policies. It has just established a presence in Brussels and it runs an electronic job directory. It is served by a small but dedicated staff in Geneva, that is in the process of being reinforced, and by an enthusiastic and competent council.

But all the achieved milestones notwithstanding, the path towards a society with which we can be satisfied is still long. The preparation of position papers geared towards the community, the European Commission or other policy makers is still quantitatively low; this activity requires

professional support to gain speed. The shaping of the astronomy part of the European research agenda does not yet benefit from a strong community involvement. While we do have members from everywhere in Europe we still lack an efficient link between all parts of the continent, although the European Forum of Astronomical Communities in the New Member States organised in Prague for the first time may be a step in this direction. Some institutions, public and private, do support the EAS, but by far not all major research institutes nor all those which benefit, also economically, from the striving community we form. The EAS membership includes only one tenth of the European astronomers, leaving a large margin for progress. The budget of the society reflects these conditions. It did increase in the last years, but is still insufficient to allow us to fulfil all our goals.

Progressing efficiently on the path ahead requires fresh insights, strengths and capacities from the president. It is therefore high time for me to step down. It has been a pleasure to serve the European Astronomical community in the frame of the EAS for many years, as editor of the newsletter, as host of the society's office at ISDC in Geneva, as council member, vice-president and finally president. Leaving the scene, I wish to express deep thanks for the trust I enjoyed all these years, my gratitude to all those with whom I had the privilege and the pleasure to work in Council, in the office and further afield. I'm confident that Roger Davies, my successor, and Council will efficiently lead the Society a long way towards what will be their ideal Society.

Thierry Courvoisier
EAS President

EAS News

EWASS 2017, 26-30 June, Prague

More than 1100 astronomers will convene later this month



With currently 1116 registered participants, the European Week of Astronomy and Space Science 2017 promises to become a lively and fruitful meeting in Prague, a historical center for European astronomy. Through the [EWASS 2017 website](#) the rich scientific programme based on 16 Symposia and 21 Special Sessions can be consulted, also interactively. Over 300 invited talks and about 400 contributed talks constitute the oral programme of the meeting, and over 400 posters will be displayed at the venue. Several plenary talks are scheduled, including those of the Tycho Brahe Prize and the Woltjer Lecture awardees, as well as the three MERAC prize winners (see below). [▼ Read more](#)

EWASS 2017 will host a Press Office; it is our ambition to provide a prominent scientific forum to highlight the recent advances in astronomy and space science, and to give the opportunity to present important scientific breakthroughs and to release these to the international press. Also on behalf of Jan Palous and Cyril Ron, the EAS welcomes you to Prague. We are looking forward to a great meeting.

EAS News

EWASS 2018, 3-6 April, Liverpool

Proposals for Symposia and Special Sessions due 14 July 2017



The preparations have started for the [EWASS 2018 meeting](#), hosted by Chris Collins (SOC chair) and Matt Darnley (chair EWASS hosting committee), in collaboration with the Royal Astronomical Society. The ACC in Liverpool is a world-class conference center, located on the banks of the river Mersey, and in short walking distance of the city center. The SOC is inviting proposals for Symposia and Special Sessions, deadline 14 July 2017. Note that this year the EWASS 2018 meeting takes place in the week following Easter, rather than during the last week of June, as Vienna is hosting the [IAU General Assembly](#) from 20 to 31 August.

Tycho Brahe Prize 2017 to Bernard Delabre

Tycho Brahe Prize to be awarded at the EWASS meeting in Prague



The 2017 Tycho Brahe Prize is awarded to Mr Bernard Delabre in recognition of his leading role in the optical design of astronomical telescopes, cameras and spectrographs over the past 40 years. [▼ Read more](#)

Bernard Delabre is a French optical engineer born in 1952. He was largely raised in Algeria and received a diploma in Optics in 1974 at the Ecole d'Optique de Morez in France. He worked for a few years at the Société SEIMA (now VALEO) designing car headlights before joining ESO in 1977 where he has been employed ever since. During his 40 years of service at ESO, Bernard Delabre has made profound contributions to optical and infrared ground based astronomy, which benefit the entire astronomical community. Three of the ten pioneering spectrographs of the twentieth century are attributed to him. He has been the chief optical designer of a number of telescopes, from the NTT to the E-ELT and beyond. His genius has been in the optimisation of the instrument designs and a clear vision of what astronomers need and how the details of an optical design can be merged with the mechanical constraints at optimal performance. It has been normal to find astronomers, mechanical engineers, control engineers, system analysts all sitting next to him in his office discussing, negotiating and evolving designs and constraints.



Bernard Delabre, laureate of the 2017 Tycho Brahe Prize.

The first major achievement of Bernard Delabre was the design of the ESO Faint Object Spectrograph and Camera (EFOSC) in the 1980s. EFOSC revolutionised astronomy by providing a wide achromatic field and a collimated beam for spectroscopic elements. His design for EFOSC exploited the development of new glass materials and novel optical components. With the ability to simply insert a grism or a waveplate to perform spectroscopy or polarimetry, astronomers had a direct view of the object through the slit while reconfiguring the instrument for another mode. This saved thousands of hours of observing time by making target acquisition a robust process. EFOSC has been widely copied both directly and as a concept to be further evolved for instruments in many ground based observatories worldwide. Another ingenious design of Bernard Delabre was the ESO Multi-Mode Instrument (EMMI), which was the first truly multi-mode camera combining low, intermediate resolution and cross-dispersed echelle spectroscopy with imaging.

Bernard Delabre's innovation in optical design routinely exploited the new developments in optical materials and manufacturing. In the 1990s, the new manufacturing technique of diamond turning of optical surfaces led to the development of the powerful three-mirror anastigmat, which was used initially for the Infrared Spectrometer And Array Camera (ISAAC) of the Very Large Telescope (VLT) and now became ubiquitous. The usage of a white pupil system for the UV-Visual Echelle Spectrograph (UVES) at the VLT, reducing the size of the instrument and increasing its efficiency, was another example of Bernard Delabre's ability to exploit novel optical concepts. In 1989, he developed the concept of Collimator Compensation of Camera Chromatism (4C) for astronomical spectrographs. His designs extend to the latest optical instrumentation with novel pupil slicing in ESPRESSO, fixed format large wavelength coverage systems in MUSE and super compact cameras for MOONS. In recent years, Bernard Delabre has also taken a leading role in the development of optical designs of instruments using curved detectors.

The design of telescopes, long confined to one of Cassegrain, Gregorian or Ritchey-Chretien solutions, was another challenge for Bernard Delabre. For the European Extremely Large

Telescope (E-ELT), he invented a beautiful five-mirror solution to meet the stringent constraints for such a 1000-m² class telescope. This design made a 42-m E-ELT technically feasible by providing an aberration-free field, an adaptive mirror conjugated close to the ground, and an intermediate focus. It is also telecentric at all locations of the focal plane without the need for a corrector.

Bernard Delabre has made his expertise available in a great collaborative spirit to institutes all over the world. He has helped review, redesign and evolve many of the instruments that are currently used in astronomy. He has been a true innovator in optical design for instrumentation during the transformational transition to large format two-dimensional detectors. As the telescopes and the detectors increased in size and improved in performance, the challenge was for the optical design to ensure that the best image quality was delivered with the fewest elements. Bernard Delabre exemplifies the tradition of working at the forefront of technological evolution and the use of novel technologies enabling new capabilities for astronomy. Attested by nearly 200 publications and more than 4000 citations, his work benefited to thousands of European astronomers, who used for their science an optical system designed by him.

EAS News

Lodewijk Woltjer Lecture 2017 to Bengt Gustafsson

Lodewijk Woltjer Lecture to be awarded at the EWASS meeting in Prague



The 2017 Lodewijk Woltjer Lecture is awarded to Prof. Bengt Gustafsson for his rich scientific career on the theory of stellar atmospheres, the interpretation of stellar spectra, and the chemical evolution of galaxies. [▼ Read more](#)

Bengt Gustafsson is a renowned Swedish astrophysicist born in 1943 in Uppsala, Sweden. He started his studies at Uppsala University, then spent two years at the Nordic Institute for Theoretical Physics (Nordita) in Copenhagen before obtaining his PhD degree at Uppsala University in 1974. He became professor of astrophysics at Stockholm University and, in 1987, professor of theoretical astrophysics at Uppsala University. He has also been guest professor at the University of Maryland (USA), at the University of Asmara (Eritrea), and at the University of Texas (USA). After an extremely active and fruitful career, Bengt Gustafsson is now professor emeritus at Uppsala University and affiliated professor at Nordita (now in Stockholm).

Bengt Gustafsson has worked extensively on the theory of stellar atmospheres, the interpretation of stellar spectra, on the chemical evolution of galaxies, and, more recently, on the early history of the Sun. He has published about 400 scientific papers some of them related to seminal studies leading to significant advances as attested by some 15?000 citations. He has also written a number of popular articles and books, and has contributed on philosophical and science-policy issues. He has served in various prestigious national and international committees, such as the Nobel Committee of Physics, the ESO Council, and the astronomy/space science panel of the European Research Council (ERC). He was the chairman of the Committee on Freedom and Responsibility in the conduct of Science in the framework of the International Council for Science (ICSU).



Bengt Gustafsson, the laureate of the 2017 Lodewijk Woltjer Lecture.

EAS News

MERAC Prizes 2017 to Selma de Mink, Kevin Schawinski and

Emmanuel Hugot

MERAC Prizes to be awarded at the EWASS meeting in Prague



At the EWASS 2017 meeting in Prague, the 2017 MERAC Prizes for the Best Early Career Researchers will be awarded. The winner in the category Theoretical Astrophysics is Prof. Selma E. de Mink for her major contributions to our understanding of the role of binarity as one of the dominant physical parameters for massive stars. The winner in the category Observational Astrophysics is Prof. Kevin Schawinski for groundbreaking work on the galaxy - black hole connection and innovative use of citizen science in astrophysics.

Finally, the laureate in the category New Technologies is Dr Emmanuel Hugot for his unique and pioneering work on innovative astronomical instrumentation, based on active systems, freeform optics and curved focal planes. [▼ Read more](#)

The **FOUNDATION MERAC** (Mobilising European Research in Astrophysics and Cosmology) is a non-profit foundation started in 2012 with headquarters in Switzerland to recognise and support young European astronomers. There are yearly three MERAC Prizes awarded by the European Astronomical Society. The prizes of 20,000 Euro are for each of the three categories (Theoretical Astrophysics, Observational Astrophysics, and New Technologies). The prizes alternate by year for Best Early Career Researcher Prizes (on odd years), and Best Doctoral Thesis Prizes (on even years). The awardees are also eligible for further support from the FONDATION MERAC.

Selma de Mink made a very large impact across different sub-disciplines in astrophysics by pushing our understanding of the role that binarity and rotation play in the complicated lives of massive stars. Her work has been absolutely crucial in changing the long held "single star paradigm" for massive stars. Although it was known before that massive binaries are common and give rise to various exciting phenomena, she and her collaborators showed that this property is necessary for a complete explanation of the main-sequence properties of massive stars, their diverse explosion channels and their various compact object remnants. Her theoretical work had large impact on the debate about the origin of merging binary black holes, as recently detected by the **LIGO gravitational wave detector**. Her early detailed simulations allowed her to explore new theories for the evolution of very close compact binary systems where the stars experience internal mixing processes. Selma de Mink is also recognised for her refreshing ideas challenging long-held beliefs, in particular on the possible role of massive binaries in explaining multiple populations in globular clusters.



The 2017 MERAC Prize Winner for Best Early Career Researchers: Selma de Mink, Kevin Schawinski and Emmanuel Hugot

Kevin Schawinski has made major advances in the observational understanding of the feedback exerted on a galaxy by outflows from an active, super-massive black hole at its centre. He also used stellar evolution to build phenomenological models of galaxy evolution. Using stars as cosmic clocks, he constrained the phases in the evolution of galaxies during which their central black holes become active as quasars. He showed using observations that while many disk galaxies, like our Milky Way, cease their star formation activity very slowly over billions of years, some galaxies whose morphology was transformed by a major galaxy merger to an elliptical shape shut down their star formation very quickly. The most plausible cause for this sudden end of star formation is that a very brief active phase by the black hole destroys the gas reservoir used as fuel for star formation. As a co-founder of the **Galaxy Zoo** project he involved several hundred thousand citizen scientists to classify nearly a million galaxies from the Sloan Digital Sky Survey. The discovery of the famous "Hanny's Voorwerp" by a Dutch school teacher taking part in Galaxy Zoo became a prototypical system for quasar ionisation echoes tracing the past energetic output of central black holes. Kevin Schawinski showed that such echoes limit the duration of a typical quasar phase to only a few hundred thousand years.

Emmanuel Hugot's interests in instrumentation are broad, from the manufacturing of super-polished freeform optics for cutting-edge instrumentation, to the development of a new type of focal planes using variable curvature detectors, thus leading to compact and cost-effective instrumentation, crucial for the E-ELT or the post-JWST generation such as the [LUVUOIR observatory](#) currently under study at NASA. Over the past ten years, he has been leading cutting-edge R&D projects for high angular resolution and high contrast imaging, based on the synergies between active and adaptive optics, materials science and innovative focal plane architectures. His work has also a multi-disciplinary impact, as it involves imaging science with applications in many fields, from bio-medical science to artistic projects. One of his main achievement is the concept and building of the first active mirror ever used in an extreme adaptive optics system. Installed in 2015 on the [Spectro-Polarimetric High-Contrast Exoplanet REsearch \(SPHERE\)](#) instrument of ESO's Very Large Telescope (VLT), this system demonstrates the gain of smart flexible optics for sharp and accurate astronomical observations and triggered worldwide interest on this technique.

Contributed News

Royal Society Publishing photography competition

One of the five categories devoted to astronomy



Following up on the success of last year, a new edition of the Royal Society Publishing photography competition is organised. The competition is run in collaboration with the [journals](#) and celebrates the power of photography to communicate science and the role images play in making science accessible to a wide audience. This competition is split into 5 categories, including astronomy, and is free to enter. [▼ Read more](#)

The overall winner will receive a prize of £500 (or currency equivalent) and winners of the categories not chosen as the overall winner will receive £250 (or currency equivalent). The closing date for entries is 31 August 2017. Full details can be found [here](#).

Contributed News

IUPAP Young Scientist Medals in the field of Astrophysics

Call for nominations due 15 June 2017



The IUPAP Young Scientist Medals of 2016 and 2017 and Awards of 1,000 EUR will be awarded for two scientists working in the field of astrophysics. The winners will be invited to give a presentation of scientific achievements at the 28th Texas Symposium on Relativistic Astrophysics (3-8 December 2017 in Cape Town, South Africa). [▼ Read more](#)

The nominated candidate must not have completed more than eight years of research after their doctorate by December 2016 and 2017, respectively. Interruptions for military service, family emergencies, etc., (but not teaching) are allowed. One Medal cannot be shared between several candidates.

Nominations may be made by anyone with an interest in the field. Self-nominations are not permitted, but a candidate could ask a mentor or colleague to provide a nomination.

The nomination papers must include:

- A citation of approximately 50 words.
- Curriculum vitae of the candidate, which must not exceed two pages in length.
- List of 6 of the candidate's most significant publications, including citation information, not to exceed one page.
- Commentary on the publications, which makes the case for the award, not to exceed two pages.

- Two letters of support (up to a maximum of three pages), at least one of which must come from someone not at the nominee's institution and not a mentor or significant collaborator.

The documents must be collated into a single pdf file called Surname_ysm.pdf, where Surname is the candidate's name. The file must not exceed 2MB in size.

Nominations not conforming to these rules cannot be accepted.

The Medal winners will be selected by a committee composed of the members of the IUPAP Astrophysics Committee (C19).

Nominations should be sent on or before **15 June 2017** to the Chair of IUPAP C19 Grazina Tautvaisiene by e-mail grazina.tautvaisiene@tfai.vu.lt.

Reminder: EAS membership fees 2017

Please pay due fees

The EAS is a society of professional astronomers. Through your membership you strengthen the voice of European astronomy, support the various EAS activities and enjoy many benefits. We thank our members who paid already the 2017 fees, which are essential for the running of the society. If you have not paid them yet, please do so [now](#). Many thanks!

About the EAS and the e-Newsletter

The European Astronomical Society (EAS) is a society of professional astronomers founded in 1990 and aiming at promoting and advancing astronomy in Europe.

Started in 2016, the e-Newsletter is a prime communication tool between the society and its members. It supersedes the short [e-News](#) and the [paper Newsletter](#) and is foreseen to be issued three to four times per year.



You prefer paper? Please, print the e-Newsletter from the PDF icon at the top-right.

If you would like to contribute, please contact [Maarten Baes](#) (Ghent University, Belgium), the EAS e-Newsletter editor.

Composition of the EAS Council

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