

2019 Annual Lecturers

65th Annual Louis H. Bauer Lecturer: *Johann-Dietrich 'Jan' Wörner*

"Human Exploration ... and Its Consequences"

Johann-Dietrich 'Jan' Wörner became the ESA Director General in July 2015. Previously, from March 2007 to June 2015, he had served as Chairman of the Executive Board of the German Aerospace Center (DLR). He was born in Kassel, Germany, in 1954. He studied civil engineering at the Technical University (TU) Berlin and TU Darmstadt, and graduated in 1985. In 1982, as part of his studies, he spent a year in Japan investigating earthquake safety of nuclear power plants. Until 1990, he worked for consulting civil engineers König und Heunisch. In 1990 he returned to TU Darmstadt, where he was appointed as a professor of Civil Engineering and took over as Head of the Test and Research Institute. Before being elected as



President of TU Darmstadt in 1995, he held the position of Dean of the newly established Civil Engineering Faculty. He headed the university from 1995 to 2007 and succeeded in making it the first autonomous university of the Federal Republic of Germany. Before joining ESA as Director General, he was head of the German delegation to ESA from 2007 to 2015 and served as Chairman of the ESA Council from 2012 to 2014.

Jan Wörner has been awarded numerous prizes and positions, such as the Prize of the Organisation of Friends of Technical University Darmstadt for 'outstanding scientific performance'. He was also appointed to the Berlin Brandenburg Academy of Sciences and to the Convention for Technical Sciences and is a representative of the Technical Sciences Section of the Leopoldina, the national academy of sciences of Germany. He has received honorary doctorates from the State University of New York at Buffalo (USA), the technical universities of Bucharest (Romania) and Mongolia, the Saint Petersburg University for Economics and Finance (Russia), and École Centrale de Lyon (France). He has received the Federal Cross of Merit (Officer's Cross, 1st class) of the Federal Republic of Germany for his continuous efforts regarding the next generation of scientists and promoting Germany as a location for Science, Technology and Engineering. He has furthermore been awarded the honors of Knight of the French Légion d'Honneur.

Jan Wörner was Vice President of the Helmholtz Association and also a member of various national and international supervisory bodies, advisory councils, and committees. He was a member of the administrative boards of École Centrale Paris, École Centrale de Lyon, TU Berlin, the Instituto Superior Técnico, University of Lisbon, the Arts and Music University in Frankfurt, and has been a member of a number of supervisory boards, including Carl Schenck AG, Röhm GmbH, TÜV Rheinland AG, and Bilfinger SE. Furthermore, he was appointed to the energy expert group of the German Government.

6th Annual Reinartz Lecturer: *Prof. dr. Floris Wuyts, Ph.D.*

"The Impact of Microgravity and Hypergravity on the Human Brain Studied with Advanced MRI Methods"

Floris Wuyts is currently full professor at the University of Antwerp, and teaches at King's College in London as well. For the past two decades he has been the head of a research lab (AUREA - Antwerp University Research center for Equilibrium and Aerospace) that studies the human vestibular system. He is Principal Investigator of two large projects of the European Space Agency concerning the evalua-

tion of cosmonauts before and after spaceflight in the International Space Station (ISS) with respect to their physiological function and brain neuroplasticity. Already 40 cosmonauts have been tested in his lab in Star City near Moscow, Russia, to investigate their vestibular systems. He and his team were among the first to uncover the link between the autonomous system and the vestibular system in humans, and recently they did pioneering research on the effect of microgravity on the human brain using advanced MRI methods. He received his Ph.D. in Physics in 1991. He has 210 publications and over 3800 citations. The English version of his book "Dizzy Me" has been sold all over the world and contains the most up to date list of vestibular disorders with their Barany criteria.



54th Annual Harry G. Armstrong Lecturer: *Adriaan Heerbaart*

"Navigating the European Skies: Money Makes the World Fly Safer!"

Adriaan Heerbaart has been the Director of the Central Route Charges Office, Finance and central IT Directorate (CFI) since its establishment in April 2018. The directorate consists of three separate entities: the Central Route Charges Office (CRCO), the Agency's Financial Services (AFS), and the central IT functions (CIT) of the Agency.



Adriaan has been leading the CRCO Directorate since September 2007. Between January 2015 and April 2018, he additionally exercised the role of Director Pan-European Single Sky (DPS), before taking on his latest role as Director CFI. He joined the Agency in 1990, working in a variety of senior financial positions in the Directorate Personnel and Finance, the Finance Directorate, and the CRCO.

Before taking over his responsibilities as Director of CRCO, he headed the Budget and Economic Affairs unit of the Finance Directorate for 5 years. His extended mandate as Director of CFI reflects his comprehensive knowledge and experience of the Eurocontrol Route Charges System, the Agency's finances and IT.

Prior to joining EUROCONTROL, Adriaan accumulated over 10 years of financial management experience in private industry as a financial controller of large multinational organizations. Adriaan studied in Leiden, Tilburg, and Antwerp and holds an M.Sc. in Business Economics. He is also an alumnus of INSEAD. He frequently lectures at Danube University Krems (Austria) and the Singapore Aviation Academy.

The Bauer Lecture will be held on Monday, May 6, 2019, at 8:00 a.m. during Opening Ceremonies in the Amazon G-T Ballroom. Educational Support is provided by KBRwyle.

The Reinartz Lecture will be given on Tuesday, May 7, 2019, at 8:30 a.m. in the Amazon G Ballroom. Support is provided by the Eugen Reinartz Memorial Fund.

The Armstrong Lecture will be held on Thursday, May 9, 2019, at 8:15 a.m. in the Amazon G Ballroom. Educational support is provided by Environmental Tectonics Corp.