

Personal data

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Born: 13 March 1962, Pfarrkirchen/Ndb., Germany
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Summary

Detlef Koschny has a Ph.D. in Aerospace Engineering and Planetary Science and is an honorary professor at the TU Munich. He has been a key player in the development and implementation of ESA's planetary science operations centres. He has built up ESA's 'Planetary Defence Office' and has been instrumental in coordinating the international community on reacting to a possible asteroid impact threat. Detlef has been an active amateur astronomer and meteor observer (both as amateur and later also as a professional) since 1975. He has retired from ESA at the end of 2022, but not from work. He is currently sharing his time between lecturing and meteor/asteroid/impact research at the TU Munich, and as technical manager for the Close-Up Imager on the ExoMars 2028 mission.

D. Koschny has extensive experience in the following areas:

- Dealing with the potential threat of an asteroid impact, both on technical, managerial, and political level;
- Optical cameras with CCD sensors for space applications – development, integration, test, calibration, operations;
- Operations of scientific payload for spacecraft, development of science operations centres for planetary missions;
- Scientific work in the area of planetary science – meteors, impact cratering, asteroids, comets;
- Team leading and management, System Engineering.

Education and professional career

- 1988 Masters at the Technical University Munich, Aerospace Engineering
- 1988 to Kayser-Threde GmbH, Munich, Germany, Project Engineer
- 1990
- Assistant of the Project Manager for the experiment HPT (High Precision Thermostat) on the Spacelab D-2.
- 1990 to TU Munich, Chair of Astronautics, Ph.D. student within the programme 'Small Bodies in the Solar System' of the Deutsche Forschungsgemeinschaft; Ph.D. thesis. Scientific work on 'hypervelocity impacts into ice-silicate mixtures'.
- 1994
- 1994 to Max-Planck-Institut für Aeronomie (MPAE, now Max-Planck-Institut für Sonnen-systemforschung, MPS), in the group of Dr. H. U. Keller
- 1997
- Project Manager for the institute's contributions to DISR (Descent Imager and Spectral Radiometer, on Cassini-Huygens), IMP (Imager for Mars Pathfinder), and MVACS (Mars Volatile and Climate Observer, on the Mars Surveyor 98 Lander)
 - Assistant Manager "Instrument" for OSIRIS (Optical, Spectroscopic, and Infrared Imaging System, for Rosetta).
 - Management of the CCD group at MPAE (~10 people)
- 1997 – European Space Agency (ESA), Research and Scientific Support Office. Scientist working on different planetary missions, European, Chinese, and Indian.
- 2016
- 2009 - (Co-)managing the Planetary Defence Office in ESA's Space Safety Programme, from March 2020 to March 2022 acting head of the office, managing ~12 people.

- 2012 - Lecturer at the TU Munich in the research group of the Professorship for Lunar and Planetary
now Exploration Technologies. Teaching a course called ‘Near-Earth objects for engineers and
physicists’, studying asteroid population models by using fireball camera data; scientific
analysis of meteor data; member of different mission science teams; performing hypervelocity
impacts in the lab.
- 2017 – Instrument Coordinator for the Close-Up Imager on ExoMars 2022.
2022
- 2023 – Starting (part-time) at the Space Exploration Institute as technical manager for the Close-Up
now Imager, now launching in 2028.
- Oct Received the honorary professorship ‘small bodies in the solar system’ – continuing to teach
2023 and supervise students.

Scientific work:

- Experimental simulation of hypervelocity impacts, observations with the Rosetta/OSIRIS and Smart-1 cameras, ground-based meteor observations - development and integration of image-intensified video cameras, development of data evaluation software, organization of observing campaigns in Spain and Australia together with international collaborators, writing and co-authoring scientific publications.
- Co-Investigator on OSIRIS (camera on Rosetta), AMIE (camera on Smart-1), CLUPI (close-up camera for the 2028 ExoMars Lander); calibration and observing campaigns
- Team Leader for DECA, the ‘Descent Camera’ for the ExoMars 2016 mission – requalification of an existing camera flight spare and delivery to the Project
- Actively pursuing research in the field of meteor science – in particular exploiting infrasound observations, operating different meteor and fireball cameras (CILBO, FRIPON, AllSky7), interested in determining the luminous efficiency and flux densities. Also linking lunar impact flash observations and asteroid modelling to the field of meteor science.

Supervision of ~80 Bachelor’s and Master’s students and 10 post-docs, co-supervisor of 4 Ph.D. students.

Other qualifications and activities

- Built a private observatory with a 40-cm mirror telescope.
- Member of the International Astronomical Union.
- Full member of the International Academy of Astronautics since 2014.
- Co-discoverer of several asteroids including over 20 near-Earth objects and three comets.
- Founding member of the International Meteor Organisation.
- Operating FRIPON and AllSky7 cameras in the Netherlands and Germany.
- Since 2021 involved in astronomical activities organized by the ‘Naturpark Bayerischer Wald’ in Germany – planning an observatory, educational activities.

Awards

- Group achievement awards for: Imager for Mars Pathfinder, Descent Imager and Spectral Radiometer on Cassini/Huygens, Rosetta, Venus Express, Mars Express, Smart-1.
- The asteroid 21686 is named “Koschny”.

Hobbies

- Amateur astronomy – I have been observing the skies not only as a professional, but also as an amateur, since being 11 years old.
- Jazz – playing the drums in a number of Jazz combos for about 35 years; started the Saxophone in 2023.
- Playing Hammond Organ in a Blues-Rock band for ~5 years.
- Likes camping in VW vans.