

**Dr. Clemens Heese** joined the European Space Agency, Noordwijk, The Netherlands, in 2012 as an OptoElectronics Engineer. He graduated from University of Münster, Germany, as an applied physicist and received a doctoral degree from ETH Zürich in Switzerland (Swiss Federal Institute of Technology) for his work on high-power mid-infrared femtosecond laser physics.

Since 2020 he continues his work on optical communication at ESA/ESOC, Germany, as the 'Head of the Optical Technologies Section', developing operational optical ground stations for communication, ranging and space debris observation.

Since 2016 he actively supports the CCSDS SLS-OPT working group, coordinating optical communication standardisation related development activities within the Agency.

In 2021 he became co-chair of the optical communication working group (SLS-OPT) and coordinated the inclusion of optical-on-off (OOK) keying in the blue books 141.0-B-1.2 and 142.0-B-1.2. In addition, together with the former SLS-OPT working group chair Bernard Edwards, he initiated the project on coherent optical communication, addressing the current commercial technology trends for inter-satellite and direct-to-Earth links.