

## Curriculum Vitae

### Personal Information

Name	Dr. Thomas Müller
Birthday/-place	April 28, 1966, Hofheim/Germany
Nationality	German
Civil status	married, one child (2004)
Homepage	<a href="http://home.mnet-online.de/tmueller">http://home.mnet-online.de/tmueller</a>
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### Profile

Planetary Scientist focusing on minor bodies, planets and satellites; extensive experience in/with space agencies and satellite operation teams at ESA, JAXA, NASA. Member of science and instrument teams of several interplanetary and space observatory projects. Project lead (PI, Co-PI) of scientific and EU research, innovation and design projects with large international teams. Physics and astronomy instructor for teachers.

### Employment History

06/2020 – ongoing      **Scientist in the High-Energy Group of MPE (Prof. Nandra), Garching**

- Technical and scientific high-energy experiments in the PANTER X-ray facility, Neuried
- Hayabusa-2 mission to near-Earth asteroid Ryugu: analysis and interpretation of close-proximity and in-situ measurements
- Infrared Moon studies in collaboration with the University of Hamburg & JAXA, Japan

01/2019 – 05/2020      **Research Group Leader at MPE, Garching**

- EU H2020 Research & Innovation: ESBO-DS, design study and development of a European balloon-based (UV) observatory, 5 institutes, budget: 3.0 M€, role: Co-PI
- Japanese interplanetary mission Hayabusa-2: external scientist, team member of the TIR instrument (thermal infrared), calibration, scientific data analysis & interpretation
- EU call "SU-SPACE-23-SEC-2019 - Advanced research in Near Earth Objects (NEOs) and new payload technologies for planetary defence", Co-PI for a 2.6 M€ tools and design study.

05/2016 – 02/2020      **Affiliated with the Center for Astrochemical Studies, Garching**

- EU H2020 Research & Innovation: „Small Bodies Near and Far“ ([www.sbnaf.eu](http://www.sbnaf.eu)): scientific exploitation of space data, state-of-the-art modeling of minor bodies, development of new tools, data products, web services and data bases. 4 institutes, budget: 1.6 M€, role: PI
- EU H2020 Coordination & Support Action: „ORISON“ ([www.orison.eu](http://www.orison.eu)), feasibility study on astronomy-oriented balloon facility, 4 institutes, budget: 0.6 M€, role: Co-PI
- Japanese interplanetary mission Hayabusa-2: external scientist, TIR instrument team member
- Calibration expert (mainly infrared and radio wavelengths) for different astronomical instruments worldwide (ground-, airborne-, and space projects)
- Project management, coordination of several expert teams, organization of meetings, workshops, co-organization of international scientific conferences
- Extensive data analysis, software development, specifications for software tools
- Creation and maintenance of web pages, responsible for EU project reporting

- Initiation, specification and testing of a new data base for infrared measurements
- Extensive publication activities, public outreach
- Instructor for high-school teacher formation courses
- Supervision of student apprentices, (PhD/master) students, postdocs

## 01/2002 – 04/2016 **Scientist in the Infrared Group of MPE (Prof. Genzel), Garching**

- Herschel-PACS Instrument Team, AIV activities, planning, operation, software development, calibration, documentation, user support
- ESA Space Observatory Herschel: calibration expert, member of ground-segment, external ESA advisory board, development of observing strategies, operational aspects
- Initiating and leading of the large Herschel scientific key project “TNOs are Cool!” (<http://www.sbnaf.eu/tnosarecool.html>), with 40 scientists worldwide (starting in 2005)
- Extensive analysis of data from different space projects, production of data products for ESA and NASA public databases, handling of satellite orbit aspects
- Peer Review activities for different scientific journals and space agencies
- Japanese interplanetary mission Hayabusa-2: external scientist, member of the TIR (infrared) instrument team; ground-based observational support at different telescopes worldwide
- Several successful funding proposals (EU, DLR Verbundforschung, DFG, Japanese Fellowship), research visits in Japan, South-Korea, North and South America
- Extensive publication activities, writing of technical documents
- Invited talks in international scientific conferences, public relation activities

## 10/1998 – 12/2001 **ESA Resident Astronomer, Infrared Space Observatory, ESAC, Madrid, Spain**

- ESA Space Observatory ISO: calibration expert, ground segment, mission planning & operations, user support & help desk, documentation, ISO handbook (editor & co-author)
- ISO-ISOPHOT Instrument Team, calibration, software development, data analysis
- Extensive publication activities and writing of technical documents
- Organization of workshops and meetings
- Scientific project work, publications, conference contributions, public outreach

## Education

1997	PhD (Dr. rer. nat.) in Physics/Astronomy, University of Heidelberg, Germany
1994	Unpaid Associate, Hubble Space Telescope project, ESO, ST-ECF, Garching
1993	Diploma in Physics/Astronomy, University of Würzburg, Germany
1989/90	Physics exchange programme, University of New Mexico, Albuquerque, USA
1985	Abitur, Gymnasium Bad Königshofen

## Languages & IT & Others

<b>Languages</b>	German (mother tongue), English (working language for more than 25 years), Spanish (Diploma Español Superior)
<b>IT</b>	Experienced with Unix/Linux, Mac OS, Windows; frequent user of Office, SQL, Python, Data Science methods; data/image manipulation and software development: IDL, Matlab, R; creation of web pages (HTML), definition & handling of databases
<b>Specific IT</b>	Knowledge of SPICE data (satellite and minor body orbits), experienced user of the Solar System Dynamics Tools (Jet Propulsion Laboratory)
<b>Licenses</b>	Car/truck driver's license B, Sports (triathlon, general, examiner)
<b>Others</b>	Asteroid (8793) Thomasmuller (since 1999)