



**Deutsches Zentrum  
für Luft- und Raumfahrt e.V.**  
in der Helmholtz-Gemeinschaft

Linder Höhe  
D-51147 Köln  
Telephone: +49 (0)2203 601-0  
Internet: <http://www.dlr.de>

# DAAD

**Deutscher Akademischer  
Austausch Dienst  
German Academic Exchange Service**

Kennedyallee 50 – D-53175 Bonn  
Telephone: +49 (0)228 882-623  
Telefax: +49 (0)228 882 9623  
E-mail: [specialprogrammes522@daad.de](mailto:specialprogrammes522@daad.de)  
Internet: <http://www.daad.de>

## DLR – DAAD – Fellowships

### Fellowship - No. 173

Applicants are invited from (but not limited to) Italy, Spain, France, Austria

- Research Area:** Space
- Research Topic:** Design of an optical GEO feeder link
- DLR Institute:** Institute of Communications and Navigation; Oberpfaffenhofen
- Position:** Doctoral Fellow
- Openings:** 1
- Topic Specification:** Future broadband access missions will pose stringent requirements on the communication feeder links between gateways and telecom satellites, classically located in GEO orbit. A high-capacity bidirectional optical link between the ground and a GEO satellite should be conceptually designed and demonstrated. The design should target 100 Gb/s and a high link availability (e.g., 99.9 %). Mitigations of atmospheric perturbations should be considered. The option of having a transparent satellite together with the concept of Radio-over-FSO should be studied. The design of the flight terminal should distinguish three main units: the optical head unit, the electronics unit and the laser unit.
- Required Qualification:** Diploma, Master or equal in Electrical Engineering / Information Technology / Applied Physics
- English competence:** English fluent, (German at least basic with willingness for improvement)
- Earliest Start Date:** As soon as possible
- Application Deadline:** Until position filled
- Further Information:** <http://www.dlr.de/kn>  
<http://www.daad.de>
- Technical Contact:** Dr. Ramon Mata Calvo