



Leibniz-Rechenzentrum
der Bayerischen Akademie der Wissenschaften



Access, Documentation and Service Desk

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Time to get answer to these questions...

- Who is allowed to use LRZ hardware?
- My file system is full. How can I get help?
- Where can I find documentation about...X ?
- I need somebody who helps me parallelizing my software. Can LRZ help me?
- How do I write a PRACE Proposal? What is PRACE anyway?
- How many cpu hours should I apply for and how do I apply?
- Can I test my program at LRZ?
- How can I use the Intel Phi Cluster?

Want my science to take wings ...

Need to perform simulations massively parallel ...

Get my huge data visualised ...

Need help to optimise and improve my code...

Seek help from LRZ...

... and ...

How to get this finished before my thesis ends?



- Open to the universities and applied universities located in Bayern
- No specific project proposal required
- Your "Master User" can request one account for you.
- Single point access request through the LRZ Servicedesk.



- www.lrz.de/services/compute/linux-cluster

How much resources do you need?

CPU Time allocation (national)	
Large Scale Projects (> 35 million core-h/year)	Gauss Centre for Supercomputing (GCS) (call twice a year)
Big projects	up to 35 million core-h/year HLRB Project proposal
Medium project	up to 10 million core-h/year HLRB Project proposal
Small project	up to 3 million core-h/year HLRB Project proposal
Test account	< 50,000 core-h HLRB Project proposal

- GCS - www.gauss-centre.eu/large-scale-application
- HLRB Projects: www.lrz.de/services/compute/supermuc/projectproposal/

Gauss Centre Large Scale Projects

- German umbrella organisation providing access to national HPC systems
- All are >PetaFlop systems with different hardware
- Three world class HPC are available for you:
 - SuperMUC at LRZ
 - JuQueen at JSC
 - Hornet at HLRS
- Extensive scientific and technical peer-review
- Biannual large-scale access calls



More information on <http://www.gauss-centre.eu>

Partnership For Advanced Computing in Europe

- An international not-for-profit association (aisbl) with 25 member countries
- Pan-European Research Infrastructure providing HPC resources
- Rigorous peer-review process
- Industry user can also apply if headquartered in the EU

- More info: www.prace-ri.eu



Computing Time Allocation via PRACE

CPU Time allocation (EU wide)

PRACE Large Scale Calls	PRACE Tier 0 Regular Call (call twice a year) (from 5 million core-h/year SuperMUC) www.prace-ri.eu
Deisa Deci Call	up to 35 million core-h/year
PRACE Preparatory Access calls	Preparing yourself for project access

- PRACE HPC Access: www.prace-ri.eu/prace-project-access/
 - Twice per year according to a fixed schedule:
 - Call opens in February -> starting September
 - Call opens in September -> starting March of the next year.
- PRACE Preparatory Access: www.prace-ri.eu/prace-preparatory-access/
 - 1st working day of the quarter (March; July; September; December)

... but if need a simple way to get into SuperMUC

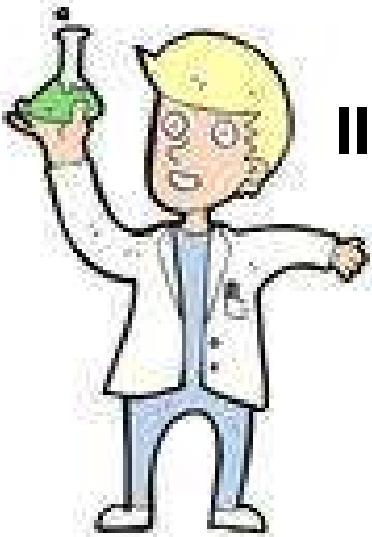
- **LRZ Project Proposal for SuperMUC**

- I. **Test account**

- Get access to the machine when you prepare for a proposal.
 - Immediately get 50k core-h to test your application.

- II. **Regular project Proposal**

- When you need more (<35 Millions) please write a proposal
 - Reviewed by the Steering committee within 2 months
 - Recommend to follow the LRZ template available
 - Open ended, no deadline



www.lrz.de/services/compute/supermuc/projectproposal

Hands on to the Intel MIC cluster SuperMIC

- Once you have access to SuperMUC please request through the Service desk.
- It should be arranged fairly quickly.
- For usage guide use SuperMIC documentation.



... remember nothing comes without efforts...

- Your responsibilities
 - Proper and timely usage of computing resources
 - Get in touch immediately if you have troubles
 - Through LRZ service desk: <https://servicedesk.lrz.de>
 - Provide us full status report after the project ends
 - Update us on your break through science done with our systems.
 - ...and help us to help you better...



Documentation for Users

- Most of the user documentation is available under “Compute Services”
- For SuperMUC
www.lrz.de/services/compute/supermuc
Go to section
“Documentation for Users”
- For Linux cluster:
www.lrz.de/services/compute/linux-cluster
Go to section
“Documentation, Education and Training”
- If you get lost seek help of Google!

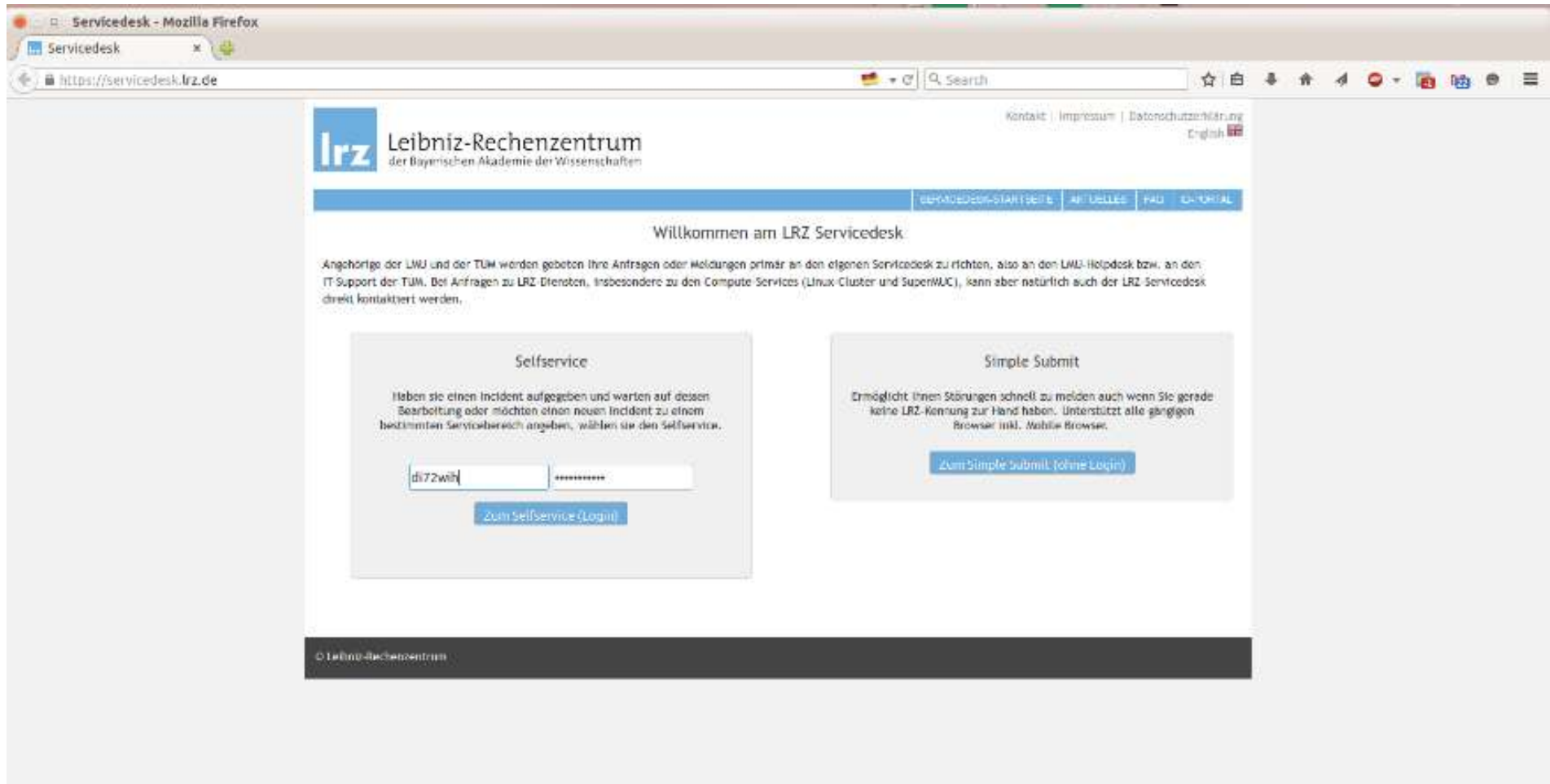




- Your single gateway to contact us for any trouble with guaranteed response
- Go to: <https://servicedesk.lrz.de>



LRZ Service Desk: Demo



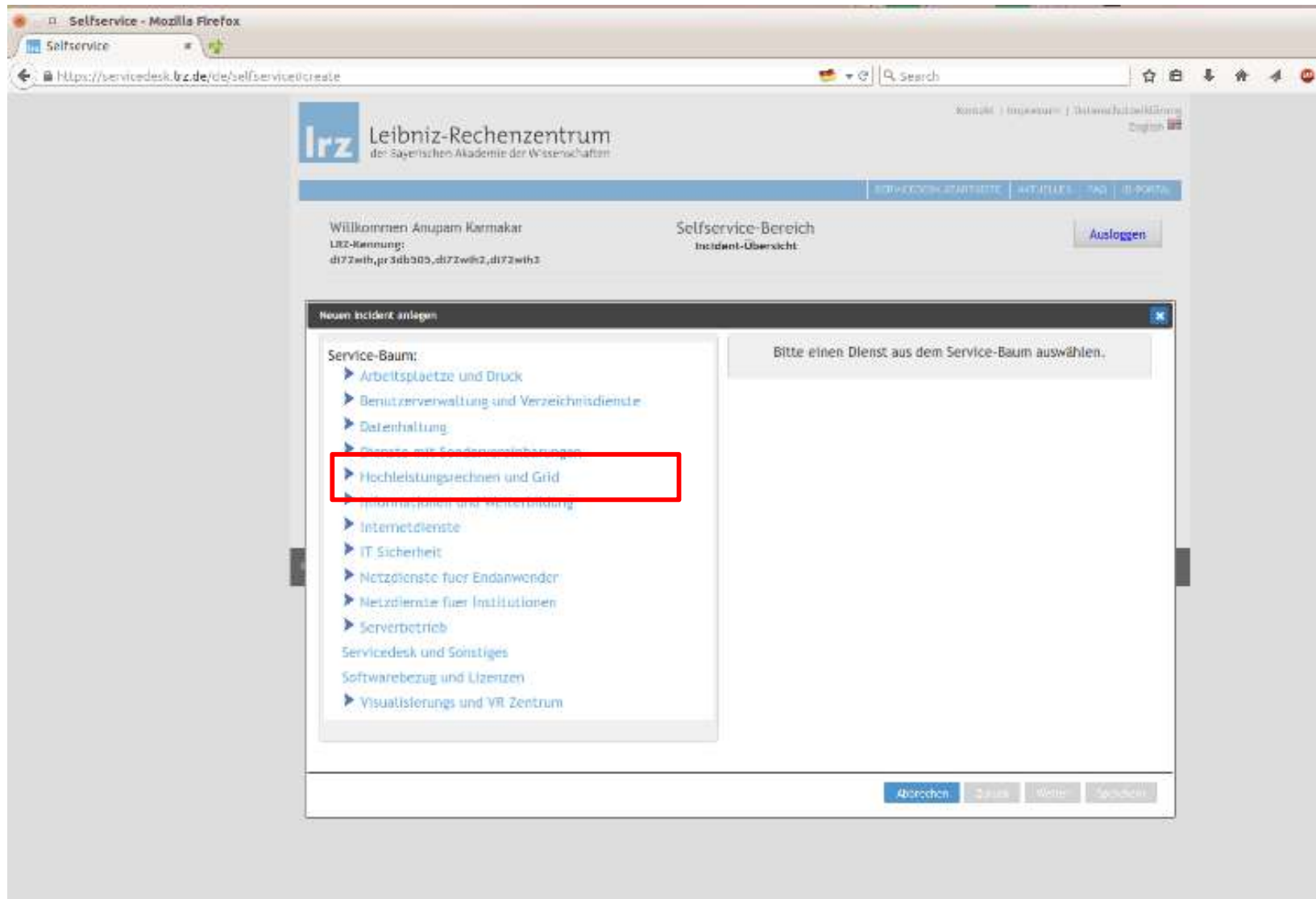


LRZ Service Desk: Demo

The screenshot shows the LRZ Service Desk interface in a Mozilla Firefox browser. The page title is "Selfservice - Mozilla Firefox" and the URL is "https://servicedesk.lrz.de/de/selfservice". The page header includes the LRZ logo and "Leibniz-Rechenzentrum der Bayerischen Akademie der Wissenschaften". The user is logged in as "Anupam Karmakar" with the LRZ ID "di72whh_pr3db505,di72whh2,di72whh3". The page is titled "Selfservice-Bereich Incident-Übersicht" and features a "Neues Incident" button highlighted with a red box. Below this, there are tabs for "Aktuelle Incidents (0)" and "Abgeschlossene Incidents (1)". A search filter is present, and a table with columns "Incident-ID", "Aufnahmezeitpunkt", "Kurzbeschreibung", "Dienst", and "Status" is visible. The footer contains the copyright notice "© Leibniz-Rechenzentrum".



LRZ Service Desk: Demo





LRZ Service Desk: Demo

The screenshot shows the LRZ Service Desk interface in a Mozilla Firefox browser. The page title is "Selfservice - Mozilla Firefox" and the URL is "https://servicedesk.lrz.de/req/selfservicecreate". The page header includes the LRZ logo and "Leibniz-Rechenzentrum der Bayerischen Akademie der Wissenschaften". The user is logged in as "Anupam Karmakar" with an "LRZ account: dl72whn,pr3ds505,dl72wh2,dl72wh3". The "Selfservice area" is set to "Incident overview".

The "Create new incident" form is open, showing the following fields:

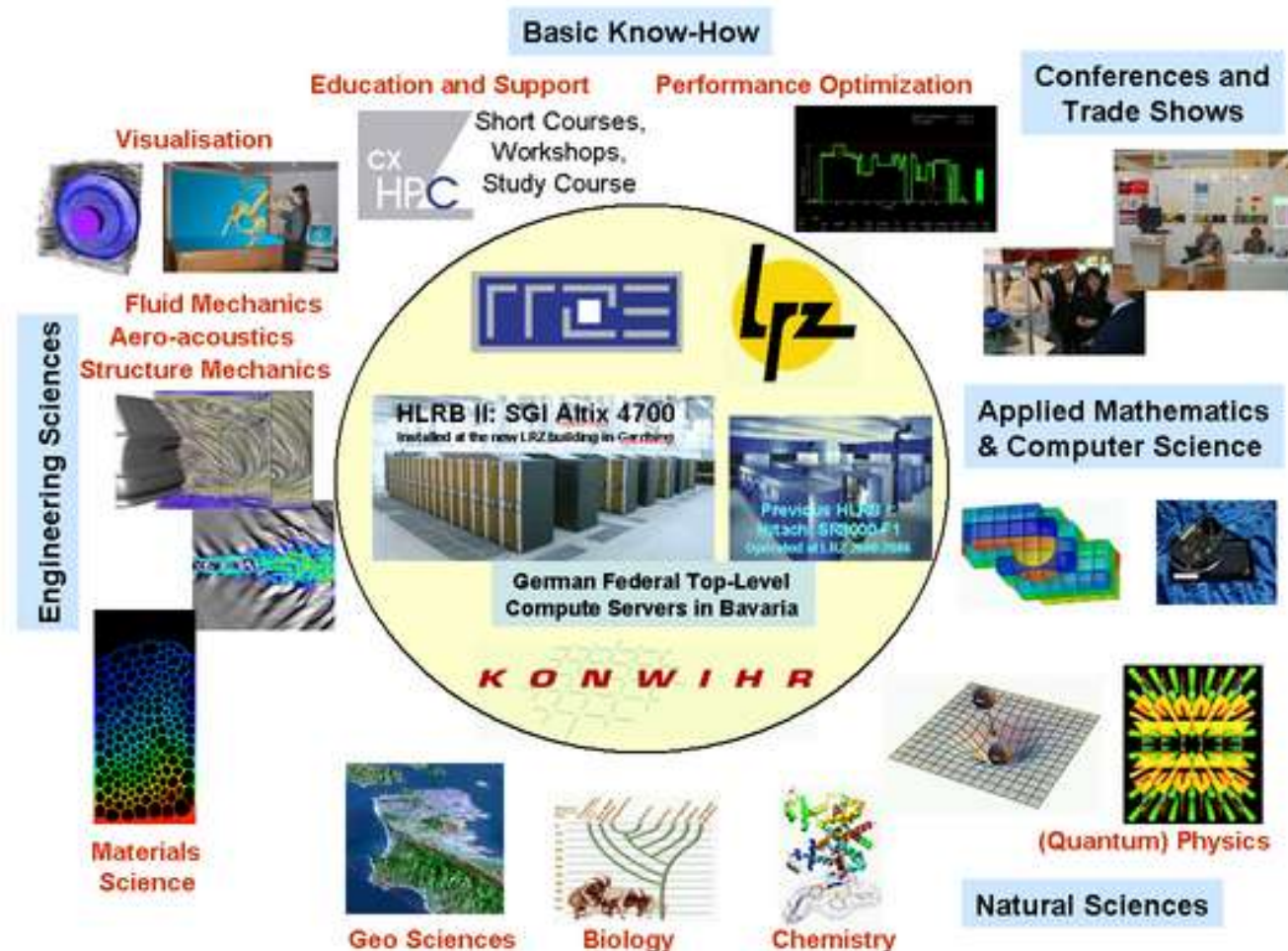
- Provided contact information:** E-Mail: Anupam.Karmakar@lrz.de, Telefon:
- Incident information:** Service: high performance computing and grid, Alternative email, Alternative phone, Affected user
- Description:** * Description, * Type: anfrage
- Details:** * Details
- Attachments:** Browse... No files selected.

Buttons at the bottom of the form include "Cancel", "Back", "Previous", and "Save".

Express your problem as detailed as possible.

KONWIHR – Bavarian funding for HPC Research

- The Bavarian Competence Network for Technical and Scientific High Performance Computing





KONWIHR – Bavarian funding for HPC Research

- Established by the Federal State of Bavaria in May 2000 to support HPC related science.
- Special focus on porting, optimization and parallelization of application codes for the HPC resources in Bavaria.
- Expertise of the two computing centers LRZ and RRZE to be utilized to enhance HPC research in Bayern.
- Application twice a year :
 - 31st March and 30th September
- Detailed information : www.konwihr.uni-erlangen.de



Partnership Initiative in Computational Science (PICS)

- **Individualized services for selected scientific groups – flagship role**
 - Individual support and guidance and targeted training & education
 - Planning dependability for use case specific optimized IT infrastructures
 - Access to IT competence network and expertise at Computer Science and Mathematics departments
- **Partner contribution**
 - Embedding IT experts in user groups
 - Joint research projects (including funding)
 - Scientific partnership – joint publications
- **LRZ benefits**
 - the (current and future) needs and requirements of the respective scientific domain
 - Developing future services for all user groups

Contact: Dr. Anton Frank (frank@lrz.de)

- LRZ initiative to help researchers tackle HPC issues.
 - Domain specific high-level support for HPC
- Collaborations for code optimisation, performance improvements, I/O debottlenecking, memory optimisations etc.
- Preparing proposals for EU, national Or KONWIHR etc.
- Focus science areas:
 - **A**strophysics Lab (astro@lrz.de)
 - **B**ioscience Lab (bio@lrz.de)
 - **G**eoscience Lab (geo@lrz.de)
 - **E**nergy Lab (energy@lrz.de)






LRZ Astro Lab

- Dedicated support team for Astrophysics and plasma physics.
- Apart from high-level support HPC partnership
 - Through third party projects
 - KONWIHR projects etc.
- Get in touch with us right from the beginning of your HPC project.
- **Astro Lab High Level Support call**
 - First call ended in January 2015
 - Next one during Q4/2015

Contact: Anupam Karmakar (karmakar@lrz.de)

In a nutshell

- Access process: [GCS](#), [PRACE](#) or [LRZ project](#)
- Eligibility of usage: [German and EU researcher](#)
- Help in confusion or trouble: [LRZ service desk](#)
- Require documentation: www.lrz.de/services/compute and go to "Documentations for Users "
- High level support: [LRZ application Labs](#) (astro, geo, bio, energy@lrz.de)
- Guidance in writing computing proposal: [Service desk](#)
- Interested in collaboration: [LRZ Partnership Initiative](#)
- Any burning queries:  [Service Desk.](#)