

Michaela Barth

✉ caela@kth.se

+46 70 090 7891

www.linkedin.com/in/michaela-barth-18a33774/

TL;DR

Experienced manager within digital infrastructure and e-science. Technical and research background. Strong interest in sustainability, realisation of benefits, cost efficiency as well as competence development.



📦 Experience

Project coordination and management for research infrastructure on National, Nordic and European level

KTH Royal Institute of Technology:

HPC Technical Project manager (since November 2020) at PDC Center for High Performance Computing

- Organisation and preparations for putting the national academic HPC flagship system Dardel in place (e.g. introducing LDAP, introducing SSH key pair login, Total cost of Ownership calculations, digital power consumption twin)
- Industrial customer handling (cost calculations, contracting, accounting supervision and support for computational services, storage and BaaS)

Other ongoing:

- Part of the **KTH Research Data Team** (since February 2020): collaborating on proposing university guidelines, course creation and pilots (e.g. InvenioRDM)
- Vice-chair of the Swedish Biodiversity Data Infrastructure SBDI: steering member in precursor organisations BAS and SLW since January 2018

NordForsk:

Executive Manager at Nordic e-Infrastructure Collaboration (NeIC) (March 2013 – February 2021) at typically 80%

- Setting up and leading the NeIC Generic Area and the Pool Competencies focus area (incl. data management), as well as the NeIC HR policy incl. monitoring
- Leading evaluations on NHPC or the Nordic use of PRACE
- Ownership for 10+ projects facilitating the development of advanced IT tools and services in the Nordics: Steering and overseeing activities on e.g. scientific software, cloud computing, LHC Tier-1, resource usage accounting, improved weather forecast quality, climate modelling and digital humanities (SGAS maintenance, B2SHARE Nordic, Nordic WLCG Tier-1, CodeRefinery++, Glenna++, iOBS++, Ratosk, NDHL, NICEST2) with an annual typical budget worth of 35 MNOK
- Strategy development and portfolio management as part of the NeIC Executive team
- Benefit realisation, HR competence development and strategy implementation as part of the Project Management Office

KTH Royal Institute of Technology:

Highlights from participation in several European collaboration projects:

PRACE RI Swedish coordination for project phases 2IP, 3IP and 4IP (Sept 2012 – April 2017), also PRACE industrial support (SHAPE) and Swedish PRACE DECI contributions and processes (September 2012 – June 2022, with interruptions)

EUDAT Task leader for Task 7.2 *Joint Access to Data, HTC and Cloud Computing Services* (June 2015 – April 2018); part of 7.1 *Joint Access to Data and HPC Services*

EGLeu Coordinator *Interoperations between NGIs and other DCIs* (May 2010 – August 2011); Engagement in OGF working groups PGI, IPG and SIENA

NDGF Operational Manager and **EGEE III Operational Documentation head** (Stand-in, October 2009 – January 2010)

Setting up and hands-on operation of e-infrastructures

- System administrative staff at PDC Center for High Performance Computing)
- Operation and user support for PDC SSH key pair login solution (ongoing)
 - Designing and prototyping PDC LDAP solution and PDC login solution (November 2020 – February 2022)
 - Swedish PRACE DECI LDAP (branch) maintenance, MySQL accounting database (DART), sometimes also PRACE OoD (Sept. 2012 – June 2022, with interruptions)
 - Server virtualisation with KVM and external storage (May 2010 – August 2011)
 - SweGrid II cluster setup and acting as Operator on Duty, ROD/C-COD, Ticket Process Manager and User support for EGEE III and NDGF Tier-1, also local Registration Authority and DEISA WP3 staff (September 2008 – April 2010)
 - Server virtualisation with xen (September 2008 – April 2010)

Employee at the Institute of Astro- and Particle Physics, University of Innsbruck within Austrian Grid phases 1 & 2, and EGEE & EGEE II (January 2005 – December 2007)

- System administrator (Linux) for local Grid services and computing clusters
- Local registration authority (certificate distribution)
- Courses and support for local and remote Austrian Grid users

User helpdesk at the Central Information Technology Service, University of Innsbruck (October 1999 – September 2002 and October 2003 – September 2004)

Education

Ph.D.

Ph.D. (ISCED 6) at the Institute of Astro- and Particle Physics, University of Innsbruck, Austria, funded by Research Scholarship for Austrian Graduates and Tyrolean Science Fund; *Astrophysics and Grid Computing – an Analysis of experienced Gain on the Basis of selected Case Studies*

Master studies

Master of Science (ISCED 5A) in both Physics and Astronomy at the University of Innsbruck, Austria; Winner of the ÖGA² Master Thesis Award 2003
Students representative for Physics for four years (1999 – 2003)



Skills

Event organisation and public outreach

On behalf of NeIC:

- Event organisation (e.g. 5-day FAIR data stewardship workshop: *Supporting FAIR data interoperability* in 2019, Nordic Open Science Cloud 2018, NeIC 2017 AHM, NeIC 2015 conference, EGI Nordic coordination meeting 2014, Nordic accounting workshop session during the EGI Community Forum 2014, Nordic accounting workshops 2013 and 2014)
- Stakeholder management: Keeping contact to NeIC members and other parties

On behalf of PDC:

- Event organisation: Swedish Operators Network of Competence (SONC) meeting, (December 2021); PRACE Spring School 2017 – *HPC in the Life Sciences* (April 2017; in conjunction with BioExcel); PRACE Sweden F2F (August 2013 in Lund and May 2016 in Stockholm); PATC Course *Parallel Workflows for Computational Science and Engineering* (December 2013, together with CSC FI)
- Presentations at international conferences (e.g. at EUDAT; EGI Community Fora; Nordic Conference on Research infrastructure; OGF)
- Support at several PDC summer schools since 2010
- Writing PDC-Newsletter articles (e.g. [The PDC-Portal for improved login](#), Vol I, 2021 or [PRACE: Change of Pace](#), Vol I, 2022) or articles for the PDC web (e.g. [Sustainable computation and data storage with PDC](#), 2023)
- Guided tours through the computer hall

Other:

- *2nd Austrian Grid Symposium in Conjunction with the 6th Austrian-Hungarian Workshop on Distributed and Parallel Systems*, 2006

Technical skills

- Daily survival: [Office 365](#) and free alternatives, [Indico](#), [Agresso](#), [Wiki](#)
- Collaboration: [Trello](#), [Confluence](#), [Lucid](#), [Jira](#), [RT](#), [BCSW](#), [Zenodo](#), most chat and video tools
- [Linux](#) (e.g. tutored for *Real-time Linux Modules*, *Dataprocessing + Control on Linux PCs* or *Operating Systems Tutorial* at Institute of Computer Science, Univ. of Innsbruck (March 2003 – July 2007), system administrator work at Institute for Astro- and Particle Physics, University of Innsbruck (January 2005 – December 2007) and at PDC, KTH (start September 2008)
- Coding: [Python](#), [C/C++](#), [Java](#), [Perl](#), [Fortran](#), [bash](#), no awk guru though
- Collaborative review and versioning: RCS, [GitHub](#), GitLab
- [Software development](#) skills, taught e.g. *Software Development III* (Java: GUI, Threads, first Client/Server steps) or worked as software developer for a medical subsidiary of PHILIPS: Java, Perl, graphical design, database connection, 2002 – 2003 (part time), held *MPI Point to Point II* (lecture & lab) and *MPI Collective Communication* (lecture & lab) for the PDC summer school
- Databases: used [MySQL](#), [PostGRESQL](#) and [SQLite](#), taught *Databases and Information Systems* at the Institute of Computer Science, University of Innsbruck
- [OpenLDAP](#) (used within DEISA WP3, PRACE DECI and later at PDC)
- Web presence administration and design with CSS and XIMS, e.g. for Institute of Astro- and Particle Physics, University of Innsbruck until 2007 or pro bono for *Naturwissenschaftlich-Medizinischer Verein der Universität Innsbruck* (2005 – 2008)
- Used [Nginx](#) HTTP server, [Flask](#) Micro web framework and [Uwsgi](#) web server gateway interface for the PDC login portal.
- [Cloud computing concepts](#) (e.g. reviewed Kubeflow evaluation; participated in workshops on Singularity or Docker)
- [x509 certificate handling](#) (e.g. Local certificate registration authority for Austrian Grid until 2008 and NorduGrid 2008 – 2013; automating IGTF bundle and revocation list retrieval for PRACE Sweden, or creating self-signed server certificates with Subject Alternative Name for login solution pilots)
- Social media used in a professional context: [X \(Twitter\)](#), [LinkedIn](#)

Courses and certificates

- Tieto *Practical Project Steering PPS-1* (September 2013; worth 22 PDUs) and Tieto *PPS-2* (October 2016 ; worth 22 PDUs)
- Mindset PMP® course (*Leda utan att vara chef*, worth 14 PDUs) (mainly June 2016)
- Tieto PPS courses *Portföljstyrning / Portfolio Management* (June and November 2018), *Programme Management* (August 2018) and *Steering Group* (November 2017; also November 2020)
- Taurus *Ekonomi*, November 2018
- *GO FAIR* Readiness Certificate (FAIR data stewardship course, March 2019)
- Webcourse *Introduktion Autism*, June 2019
- Hewlett Packard Enterprise Training in *Cray Shasta* (spin-off SUSE SLES, 1 week, April 2020); HPE *ClusterStor E1000* training course (April 2020); HPE *HPCM training* (2 days, June 2022 plus 3 days, November/December 2023)
- Tieto PPS *Leadership* course (February 2021)

Languages

German, Swedish C1, English C1, French B2, Italian B1, Spanish A2, Japanese