



Massimiliano (Max) Novelli

København, Denmark
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Education

- February 1998 **Politecnico di Milano, Milano, Italy**
Laurea (5 years, MS Equivalent), Software and Automation Engineering
- July 1990 **Istituto Tecnico Industriale Statale A. Einstein, Vimercate, Italy**
Diploma, Electronics and Software

Languages

Italian (native), **English** (fluent), **Spanish** (basic), **Danish** (beginner)

Skills

- “Out side the box” thinking and innovation
- Project management and team leading
- Multi cultural and international experience
- Problem solving and conflict resolution
- Reporting to top management
- Public speaking

Experience

May 2024 – Present

Senior Data Curation Scientist
European Spallation Source ERIC, DMSC, SIMS
Copenhagen, Denmark

- Member of the Scientific Integration Management Systems team
- Leader of OSCARS project PaN-Finder
<https://oscars-project.eu/projects/pan-finder-photon-and-neutron-federated-knowledge-finder>
- Project leader for SciCat Scientific Data Catalogue project.
<https://www.scicatproject.org/>
- Co-leading effort for multiple SciCat sub-project, including Scicat Ingestor and Scitacean.
- Maintaining relationships with SciCat regional and industry partners
- Organized SciCatCon 2025 at ESS Copenhagen offices.
- Project leader for metadata definition and data FAIRness of facility instruments.
- Leading facility FAIR data initiative
- Maintenance and improvements of European project PaNOSC data portal.
<https://data.panosc.eu/>
- Supervising and co-supervising various student projects
- Grant applications
- Public speaking

March 2021 – May 2024

Data Curation Scientist
European Spallation Source ERIC, DMSC
Copenhagen, Denmark

- Member of the Scientific Integration Management Systems team
- Leading the SciCat project, including collaborators meeting.
- Co-leading effort for the SciCat high-level python interface library Scitacean
- Member of the team collecting requirements, designing and implementing raw data ingestion workflow for the first set of instruments, including data curation
- Curation of multiple legacy datasets and ingestion in data management system.

- Leading the efforts for federated search and scoring system sub-projects within the European project PaNOSC (Proton and Neutron Open Science Cloud)
- Leading FAIR data initiative

January 2018 – February 2021

**Head of Informatics and Data
Rehab Neural Engineering Labs (RNEL),
University of Pittsburgh, Pittsburgh, PA. U.S.A.**

Public roles:

- Serving on multiple NIH SPARC boards: Change Control Board for SPARC portal (<https://sparc.science>), Team Black for oSparc platform (<https://osparc.io/>), and Data Standard Committee.
- Responsible for lab data sharing and data curation efforts, including NIH SPARC and BRAIN initiatives.

Operational management:

- Responsible for curation, design, and management of experimental data
- Providing support for multiple research projects on IT, data and computer science topics.
- Managing lab IT team and budget, including incident resolution and reporting to upper management.
- Chief architect, senior sys admin and manager of lab IT infrastructure and services.
- Participating in grants applications and budgets preparation.
- Active member of the whole department IT infrastructure management team.

Project management:

- Leading and managing software and data projects, including Multipurpose Data Framework (MDF) project.
- Responsible for scaling and automating data analysis.
- Collaborating with university technology office on integration projects.

Research and Development:

- Experimenting with novel data visualization to improve data quality and usability.
- Leading independent research projects on data analysis, optimization, visualization and validation.

September 2019 – June 2020

Independent Consulting

- Technical and management advice on data policy and data management strategy for large-scale research infrastructure, ***Extreme Light Infrastructure (ELI), Prague, Czech Republic.***
- Provided UI/UX improvements and user feedback on public facing website. ***Kuma Wellness***, kumaga.com.

November 2012 - January 2018

**Data Architect, Data Manager, Software Engineer, System Administrator
Rehab Neural Engineering Labs (RNEL),
University of Pittsburgh, Pittsburgh, PA. U.S.A.**

- Responsible for experimental data architecture, curation, design and management.
- Senior system administrator for lab IT infrastructure.
- Managed lab IT team.
- Designed and upgraded internal lab wiki based on Drupal 7.
- Designed, implemented and tested new experimental Multipurpose Data Framework (MDF).
- Designed data queries leveraging map/reduce and aggregation.
- Maintained previous lab experimental data database.
- Designed and implemented data migration to new data framework.
- Developed custom software for experimental data acquisition and processing.
- Implemented metadata collection system based on Drupal 7 (LAMP stack).
- Intranet site upgrade and experimental code documentation.
- System integration for single login using university credentials.
- Participated in the hiring process to fill the System Administrator position.
- Recipient of a start-up grant with Pittsburgh Super Computing Center for distributed data ingesting and analysis.

September 2016 - December 2016

Part Time Instructor
**Department of Computer Science,
University of Pittsburgh, Pittsburgh, PA. U.S.A.**

- Taught “Introduction to Programming with Python” (CS0008), Fall 2016
- Prepared material for and graded in-class test and take-home projects

July 2008 - November 2012

System Administrator, Programmer, Data Manager, Web Administrator
**Learning Research and Development Center,
University of Pittsburgh, Pittsburgh, PA. U.S.A.**

- Managed multi lab unix system designed for fmri and eeg research, data analysis and storage.
- Managed web servers, multiple Drupal sites, backup, monitoring and clustering systems, code and project repositories, custom Linux high end graphic workstations.
- Managed multiple students involved in different projects.
- Worked on technical requirements for grant applications.

May 2002 - December 2012

Consultant, Manager
Nove Inc., Pittsburgh, PA, U.S.A.

- Managed small business.
- Designed and developed custom applications: web-based databases, installation scripts, system monitoring.
- System administrator for Unix-Windows network.
- Hardware, software, network consulting and solution provider for Nove, Inc. client base.

August 2006 - July 2008

System Administrator, Programmer, Data Analysts
**Brain Imaging Research Center (BIRC),
University of Pittsburgh, Pittsburgh, PA. U.S.A.**

- Managed heterogeneous IT environment including Linux cluster with 20 nodes based on Condor, local firewall and web server.
- Responsible for cluster design, installation, monitoring and management system.
- Facilitated fmri/meg data analysis and preprocessing for neuroimaging research lab.
- Installed and maintained analysis tools, developed scripts and applications.

May 2004 - July 2006

System Analyst
**University Center for International Studies (UCIS),
University of Pittsburgh, Pittsburgh, PA. U.S.A.**

- Managed Active Directory Windows network with more than 100 nodes, including MS Exchange, domain controller, backup server, linux web server.
- Responsible for system maintenance, upgrading, backups, security and log analysis.
- Provided desktop support.
- Developed custom system monitor analysis and disaster recovery tools.

Previous Experiences

- *System administrator,*
UPMC, University of Pittsburgh, PA. U.S.A.
- *Software consultant, designer and developer,*
University of Pittsburgh, Pittsburgh, PA. U.S.A.
- *Software consultant, designer and developer,*
Semeion Srl, Milan, Italy

Professional development

- Practical Knowledge Modeling: Ontology Development 101
https://www.udemy.com/share/101GSC3@0MHqnui2P8r_GWcGPFrHDzV1aP1Un0fbHzINDJdKDZNAJrc35Namv5EDGQh9GiKMCQ==/
Udemy.com

Technical Skills

Programming Languages

Python, Javascript, Typescript, Matlab, Bash Scripting, C/C++,
Others: PHP, R, Julia, Java, Powershell scripting, Awk, Perl, Visual Basic, TCL/TK, PostScript, Lisp, Assembler.

Web technologies, languages, and formats

Javascript, nestjs, loopback 3, nest.js, node.js, react.js, jQuery, d3.js, Three.js,
HTML, CSS, SCSS,
Yaml, JSON, XML

Operating Systems

Linux: *LinuxMint, Ubuntu, CentOS, Red Hat, Fedora, Arch Linux.*
Mac OS X, Microsoft Windows.

Data Manipulation Environments, Languages and Applications

Jupyter notebooks, Python, Python libraries
Matlab, R
Others: R-Studio, Octave, Afni, FSL, SPM, DSISTudio (*fMRI*)

Data Visualization

Python with matplotlib, seaborn, ggplot, plotly, bokeh, pyviz
Javacript with d3.js and three.js

Data Management

SciCat (<https://github.com/SciCatProject/>, <https://scicatproject.github.io/>)
Multipurpose Data Framework (MDF, <https://bitbucket.org/nitrox/mdf>)
Pennsieve (<https://app.pennsieve.io/>, previously Blackfynn, <https://www.blackfynn.com>)

IDEs

VSCode, PyCharm
Others: PhpStorm.

Virtualization and Containers

Docker, Docker composer, Kubernetes, Helm charts
Others: Xen and xen virtualization tools

Server Applications

Apache httpd, Nginx, Samba, Zabbix, CondorHQ, Active Directory, LDAP
Others: Nagios, Drupal, Iptables Firewall, SSH, Linux Software Raid, Dhcp, Dns, Openvpn.

Databases

MongDB, MySql, Postgresl, SciDB.

Code Management

Git, GitHub, BitBucket,
SVN

CI/CD

GitHub actions and workflow.
GitLab actions and pipelines.

Open source contribution

- SciCat project (<https://github.com/SciCatProject>)
Project Leader, Collaborators Meetings, CI/CD, Testing, Code reviews and contributions, Releases management
- PaNOSC Search Scoring (<https://github.com/panosc-eu/panosc-federated-search-service>)
Project Management, Code Development and Testing, Releases
- MDF and related projects (<https://github.com/pitt-rnel/mdf>)
Project Management, Features selection, Code Development and Testing
- bf_rest (blackfynn rest api) (https://github.com/pitt-rnel/bf_rest)
Project Management, Features selection, Code Development and Testing
- Rnel Dragonfly (Dragonfly-msg) (https://github.com/pitt-rnel/rnel_dragonfly)
Project Management, Code Development, Linux build
- DSI Studio (linux) (<http://dsi-studio.labsolver.org/>, <https://github.com/frankyeh/DSI-Studio>)
Linux build

Conferences and Meetings

- DAPHNE4NFDI annual meeting, March 2025, Berlin, Germany
- OSCARS annual meeting, March 2025, Rome, Italy
- Lund University Open Science Data, November 2024, Lund, Sweden
- NoBUGS 2024, September 2024, Grenoble, France
- SciCatCon 2024 @ PSI, July 2024, Villigen, Switzerland
- Combine Workshop, April 2024, Malmo, Sweden
- PaNOSC closing event, November 2023, Grenoble, France
- IKON 24, November 2023, Lund, Sweden
- Open Science Fair, September 2023, Madrid, Spain
- SciCat annual meeting, July 2023, Oxford, UK
- ESS ILL User Meeting, October 2022, Lund, Sweden
- NOBUGS 2022, September 2022, Villigen, Switzerland
- SciCat annual meeting 2022, July 2022, Hamburg, Germany
- PaNOSC & ExPaNDS face-to-face meeting 2022, June 2022, Prague, Czech Republic
- PyCon 2020, April 2020, Pittsburgh, PA, USA (*Canceled because of the pandemic*)
- ISAN 2019, SPARC meeting, July 2019, Los Angeles, CA, USA
- EuroVis 2019, June 2019, Porto, Portugal
- NIH SPARC Data Workshop & Hackathon, December 2018, Washington D.C., USA
- Data 2018, Porto, Portugal
- J on the Beach 2018, Malaga, Spain
- NIH SPARC initiative meeting, April 2018, Washington D.C., USA
- NIH SPARC initiative meeting, November 2017, Washington D.C., USA
- J on the Beach 2017, Malaga, Spain
- Data Conference 2016, Lisbon, Portugal
- Society for Neuroscience 2014, Washington D.C., USA

Presentations, Posters and Publications

- SciCat: the way forward
DAPHNE4NFDI Annual Meeting,
March 2025, Berlin, Germany
- PaN-Finder
OSCARS annual meeting
March 2025, Rome, Italy
- Maximizing Scientific Output through Data FAIRness
Lund University Open Science Data
November 2024, Lund, Sweden
- SciCat Development
MxCuBE ISPyB meeting 2024 (remote)
November 2024, Trieste, Italy
- PaN-Finder: Intelligent Search Engine
Metadata Catalogs Satellite Meeting, NoBUGS 2024
September 2024, Grenoble, France
- A year in review, and Facility update
SciCatCon 2024
July 2024, Villigen, Switzerland
- SciCat
Dectris visit
July 2024, Baden, Switzerland
- Data, Metadata and FAIR
DMSC Summer School,
September 2024, Copenhagen, Denmark
- Data, Metadata and FAIR
ComBine workshop,
April 2024, Malmo, Sweden
- NoSQL dataset use case
Database course workshop at University of Pittsburgh (remote)
April 2024, Pittsburgh, PA, USA

- Data, Metadata, and FAIR
FASEM workshop
March 2024, Lund, Sweden
- Maximizing Scientific Output through Data FAIRness
IKON 2024
November 2023, Lund, Sweden
- Maximizing Scientific Output through Data FAIRness
Open Science Fair
September 2023, Madrid, Spain
- Data and related stories
EuFXEL visit
September 2023, Hamburg, Germany
- Migration lessons learn, end Facility update
SciCat annual meeting 2023
July 2023, Oxford, UK
- SciCat as a data catalogue and data dissemination
UKAEA visit
July 2023, UK
- Metadata at ESS and the Scitacean project
ORSO meeting
June 2023, online event
- Federated Search
PaNOSC Closing Event
November 2022, Grenoble, France
- The Data Journey and FAIR data at ESS
ESS and ILL User Meeting
October 2022, Lund Sweden
- PaNOSC Federated Search for DAPHNE4NFDI
October 2022, DAPHNE online event
- Unified access to photon and neutron data throughout Europe
the SciCat implementation of the PaNOSC Search
NOBUGS 2022
September 2022, Villigen, Switzerland
- Facility Update
SciCat annual meeting 2022
July 2022, Hamburg, Germany
- From SQL to No-SQL (A lecture on No-SQL databases)
Database Management Systems course, Fall 2019, School of Information Science
December 4th, 2019, University of Pittsburgh, PA, USA
- Life in a Neurophysiology lab,...and more
Brown Bag Seminar, June 12th, 2019, IT'IS Foundation, Zurich, Switzerland
- About Jupyter notebooks, Python, and DAT CORE api
NIH SPARC Data Workshop and Hackathon, December 2018, Washington D.C., USA
- Identifying Electromyography Sensor Placement Using Dense Neural Networks
Conference Paper, DOI: 10.5220/0006912501300141
Data Conference 2018, Porto, Portugal
- Big Data in a neurophysiology research lab... what?,
J on the Beach, May 23rd – 25th, 2018, Malaga, Spain
Universidad Europea de Madrid, May 29th, 2018, Madrid, Spain
- Dataset curation example,
SPARC meeting, April 2018, Washington D.C., USA
- RNEL SPARC experiments: data acquisition and workflow,
SPARC meeting, November 2017, Washington D.C., USA
- Let the data flow, Data in a neurophysiology lab,
May 15th, 2017, CUNY Graduate Center, New York, USA
May 22nd, 2017, ITIS A.Einstein, Vimercate, Italy
- A Framework for Management of Complex Neurophysiological Data Sets,
Data Conference 2016, Lisbon, Portugal

- VV53, 854.03, Managing experimental data, metadata and automatic data importing in a neurophysiology lab.
M. NOVELLI; L. E. FISHER; R. GAUNT; D. J. WEBER.
Society for Neuroscience 2014, Washington D.C.

Additional Information

Citizenships

Italian, USA

Linkedin Profile

www.linkedin.com/pub/max-novelli/5/b83/652

ORCID

0000-0003-2818-0368

Website

www.maxnovelli.info

Additional professional experiences

2024 - present

Yoga Teacher Training Instructor
Yum Yoga Cafe, yoga studio
Copenhagen, Denmark

2021 - present

Yoga Instructor
Yum Yoga Cafe, yoga studio
Copenhagen, Denmark

2022

SUP Yoga Instructor
Yum Yoga Cafe, yoga studio
Copenhagen, Denmark

2019 - 2021

Yoga Instructor
Yoga Hive, yoga studio
Pittsburgh, PA. U.S.A.

2015 - 2020

Yoga Instructor
JCC, Squirrel Hill
Pittsburgh, PA. U.S.A.

Additional professional development

2025

Floor Acrobatics
Spring semester course (<https://www.afuk.dk/>)
Copenhagen, Denmark

2024

Floor Acrobatics
Fall semester course (<https://www.afuk.dk/>)
Copenhagen, Denmark

Movement Archery workshop
Workshop by Tom Weklser (<https://www.movementarchery.com/>)
Stockholm, Sweden

Aerial Acrobatics
Spring semester course (<https://www.afuk.dk/>)
Copenhagen, Denmark

2023

Movement Archery workshop
Workshop by Tom Weklser (<https://www.movementarchery.com/>)
Hamburg, Germany

Flow Acrobatics Workshop
Workshop by Kenan Dinkelman (<https://www.flowacrobatics.com/>)
Copenhagen, Denmark

2022

SUP Yoga Teacher Training (10hrs)
Yum Yoga Cafe, yoga studio,
Copenhagen, Denmark

2019

Mastering the Art of Yoga Sequencing.
Workshop by Jason Crandell
Silver Spring, MD. U.S.A.

2013

200hr Yoga Works Teacher Training
BYS Yoga Collective,
Pittsburgh, PA. U.S.A.

Volunteering

2010 - 2018

Soccer coach for travel and recreational youth teams

Interests

Yoga, cycling, bouldering, cross country skiing, running, movement
Traveling
Cooking and baking