



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

March 2021 – Present

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

- Member of the Scientific Web Application 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

Current professional Volunteering

- Member of NIH SPARC Change Control Board for SPARC portal (<https://sparc.science>),
- Team Black Leader reviewing the O²Sparc computing platform (<https://osparc.io/>)
- Member of the Data Standard Committee for the NIH SPARC project.

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/nitrosx/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

Open source contribution

- SciCat project (<https://github.com/SciCatProject>)
Repositories:
 - frontend
 - scicat-backend-next
 - backend
 - scitacean
 - pyscicat*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

Professional, Academic and Research Development

Conferences and Meetings

- PaNOSC closing event, November 2023, Grenoble, France
- 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

- Federated Search
PaNOSC Closing Event
November 29th, Grenoble, France
- Unified access to photon and neutron data throughout Europe
the SciCat implementation of the PaNOSC Search
NOBUGS 2022
September 2022, Villigen, Switzerland
- 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

Website

www.maxnovelli.info

Additional professional experiences

2023 - present

Private Yoga Instructor
Copenhagen, Denmark

2022

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

2021 - present

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 certifications and professional development

2023

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, climbing, cross country skiing, running
Traveling
Cooking and baking