Ketan C Maheshwari

km0@ornl.gov

Knoxville,
TN 37934 USA

EDUCATION ⋄ **University of Nice at Sophia Antipolis**, France.
PhD with **Highest Honors**, January 2011.
Research on parallel workflow expression and enactment on large-scale distributed computing infrastructures for data intensive applications.

⋄ **University of Amsterdam**, Amsterdam, The Netherlands.
Research M.Sc.(NVAO-accredited) in Grid Computing, August 2007.
Masters Thesis Work
To achieve integration and interoperability among several Workflow Management Systems and Problem Solving Environments (PSE) in order to realize a Medical Image Analysis Support System at the University of Amsterdam Academisch Medical Centrum, Amsterdam.

⋄ **Gujarat University**, Ahmedabad, India.
Masters in Computer Applications (MCA), September 2001.
Major Courses: Fundamentals of Programming, Database Systems, Operating Systems, Data and File Structures, Object Oriented Analysis and Design, Discrete Mathematical Structures, Numerical Methods, Software Engineering, Client Server Technologies, Networking Technologies, Computer Architecture.

⋄ **Gujarat University**, Ahmedabad, India.
Bachelors in Science, June 1998.

WORK ⋄ **Linux Systems Engineer** Oak Ridge National Laboratory, 2017 - current.

⋄ **HPC Consultant** Center for Research Computing, University of Pittsburgh, 2016 - 2017. Application development and deployment, source code debugging, expert and dedicated HPC user support, implementation and management of Petabyte ZFS storage system, gave workshops on R, CUDA, advanced Linux and Python.

⋄ **Postdoctoral Researcher** Distributed Systems Lab, Argonne National Laboratory, 2011 - 2016.
Supporting large-scale applications on HPC infrastructures, user-engagement catalyst and researcher for HPC and HTC infrastructures. Main activities include developing, deploying and running parallel applications over IBM BG/Q, Cray XE6 and Intel supercomputers, clusters and clouds. Applications include protein docking, fMRI image processing, energy systems, seismology simulation, and power grid modelling. Funded by NSF, DOE and NIH.

⋄ **ICT Developer** Informatics Institute(IvI), University of Amsterdam(UvA), 2006 to 2007.
Globus File Transfer integration to achieve transfer of large number of big files between Academisch Medical Centrum (AMC) and Storage Resource Broker (SRB) at SARA, Amsterdam. Integrated with a Visual Resource Browser.

SYNERGISTIC ⬦ **FEMA COVID-19 Support.** Active support of FEMA sponsored COVID-19
ACTIVITIES research in collaboration with Johns Hopkins researchers. *2020 Lab Director's Award*
winner for this work

⬦ **Linux Tutorial at LISA19 Conference** Broadly popular on HackerNews
Slides   Improved Version

⬦ **Workflow Research.** Collaborative inter-division workflow research with Nuclear
Sciences Division at Oak Ridge.

AWARDS ⬦ Lab Director's Award for COVID-19 research Tech support (2020)

⬦ First winner at Smokey Mountain Data Challenge (2018)

⬦ **RedHat Certified System Administrator** (190-042-697)

SKILLS ⬦ Expertise in HPC toolchains, compilers, debuggers, schedulers, storage, network

⬦ Expertise and experience in development and deployment of workflows to support
leadership scale science, container management, Kubernetes

⬦ Linux, ranked top 3 % of Linux StackExchange Community (Jan 2021)

Relevant Publications & Presentations

[1] **Ketan Maheshwari**. Linux productivity tools – a tutorial. Portland, OR,
October 2019. Large Installation System Administration (LISA), USENIX As-
sociation.

[2] **Ketan Maheshwari**, Eun-Sung Jung, Jiayuan Meng, Vitali Morozov, Venka-
tram Vishwanath, and Rajkumar Kettimuthu. Workflow performance improve-
ment using model-based scheduling over multiple clusters and clouds. *Future
Generation Computer Systems*, 54:206 – 218, 2016.

[3] **Ketan Maheshwari**, Justin Wozniak, Hao yang, Daniel Katz, Matei Ripeanu,
Victor Zavala, and Michael Wilde. Studying Application Data Handling Method-
ologies in Cloud. In *International Conference on Parallel Programming*, Min-
nesota, MN, USA, September 2014.

[4] **Ketan Maheshwari**, Alex Rodriguez, David Kelly, Ravi Madduri, Justin M.
Wozniak, Michael Wilde, and Ian Foster. Extending the Galaxy portal with
parallel and distributed execution capability. In *The 4th International Workshop
on Data-Intensive Computing in the Clouds (DataCloud at SC13)*, Denver, Co,
USA, November 2013. IEEE/ACM.