**Charles (Nick) Maggio**

Charles.D.Maggio@gmail.com | (509) 710-6017

**SKILL SUMMARY**

**Research Computing Administration**

* Director overseeing operations of a $3.5M research cluster with an annual operating budget of $1M
* Designed and implemented a “condo” program which grew the research cluster by 100% in the first three years
* Recruited and trained top-notch talent from across the US
* Conducted strategic long-term planning for campus research cyberinfrastructure, including high speed networking and data management
* Worked closely with enterprise IT on projects of shared interest and on the establishment of shared governance
* Contributed to the national research cyberinfrastructure community by serving on organizing committees for CASC and PEARC. Currently both a member of the Campus

Champions and a Region Champion for the Pacific Northwest

**High Performance Computing**

* Acted as the University expert in high performance computing
* Provided technical leadership to a team of system administrators and computational scientists
* Installed and optimized software across a wide range of scientific disciplines, including molecular dynamics, quantum chemistry, physics, genomics, proteomics, and machine learning
* Hands-on experience in the use of accelerators including GPUs and Xeon Phi coprocessors
* Evaluated researchers computing needs and advised on the best hardware for their application

**Multidisciplinary Research and Outreach**

* Led workshops in research computing and scientific programming
* Collaborated with engineers, experimentalists, and social scientists on research and publications
* Specialized in facilitating communication between mathematicians and other disciplines
* Published in multidisciplinary journals

**Scientific Computing and Data Analysis**

* Developed C, C++, Python, and Matlab code for scientific applications
* Parallelized code using MPI and OpenMP frameworks
* Applied advanced numerical methods and algorithms to a wide variety of mathematical problems
* Taught courses in scientific computing and graduate numerical analysis
* Used Matlab, Python, and R for post-processing and analysis of large data sets
* Created plots, figures, and movies using Matlab, Mathematica, and Paraview

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**EDUCATION**

**Ph.D. in Mathematics 2011**

Tulane University, Department of Mathematics, New Orleans, LA

Thesis: Interactions of calcium dynamics, muscle forces, and tissue properties in a model of uterine fluid flow and embryo transport

**M.S. in Mathematics 2006 Eastern Washington University, Department of Mathematics,** Cheney, WA

**B.S.E in Biomedical Engineering 2002 Tulane University, School of Engineering, New Orleans, LA**

**POSITIONS HELD**

**Director of Research Advanced Computing Services, Office of the VP for Research and Innovation, University of Oregon Nov 2016 – Present**

* As the first Director, launched the newly formed Research Advanced Computing Services (RACS) core facility
* Conducted national searches to hire a staff of research computing systems professionals
* Participated in shared campus leadership of computational research support

**IT Consultant/Affiliate Faculty, Office of Research, Washington State University Nov 2015 – Nov 2016**

* Responsible for the day-to-day operations of the HPC resources at WSU
* Worked with faculty to develop a strategic vision for the future of centralized HPC,
* including the establishment of a Center for Institutionalized Research Computing
* Coordinated with IT Services on the deployment of high speed networking and
* research infrastructure
* Collaborated with WSU faculty and researchers on computational research projects

**Computational Scientist, Technology Services, Tulane University Sept 2014 – Nov 2015**

* Acted as the University’s resident expert in high performance computing
* Installed, ported, and maintained multiple software stacks across many disciplines
* Advised faculty and researchers on software and compiler choices
* Sped up research code through parallelization and compiler optimization

**Visiting Assistant Professor, University of Notre Dame Aug 2011 – July 2014**

* Taught courses in the Department of Applied and Computational Mathematics and Statistics. These classes ranged from sophomore level computer programing to graduate level fluid dynamics.
* Conducted research in the fields of numerical analysis, mathematical biology, and computational fluid dynamics.

**PUBLICATIONS**

Charles D. Maggio, Scott Jennings, Jennifer Robichaux, Peter Stapor, and James M. Hyman, A

modified Hai-Murphy model of uterine smooth muscle contraction, Bulletin of Mathematical Biology, January 2012, Volume 74, Issue 1, pp 143-158

**PRESENTATIONS**

Lead Instructor, Intro to HPC Workshop, Tulane University

6th World Congress on Biomechanics, Singapore

“An integrative model of excitation driven fluid flow in a 2D uterine channel”

Applied Math Colloquium, University of Auckland, Mathematics Department “Multiscale modeling of the uterus”

62nd Annual Meeting of the APS Division of Fluid Dynamics

“An integrative model of excitation driven fluid flow in a 2D uterine channel”

Pacific Northwest Conference on Comprehensive Mathematical Modeling

Sept 2015 Aug 2010

Jun 2010 Nov 2009 Jun 2009