Neal D. Nesbitt

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(832) 577-2072

Employment

Software Developer Feb. 2021 - Present	**Hexagon PPM**, Madison, Alabama Advanced modeling support and maintenance of core math, geometry & topology, and ACIS related code. ISO 9001 Agile
Technical Specialist July 2014 - Aug. 2015	**D. Nesbitt Associates**, Missouri City, Texas Wastewater membrane R&D. CAD: pipe routes, P&IDs, fabrication. Steamblowing & chemical cleaning support.
Blacksmith Mar. 2010 - Feb. 2012	**George Ranch Historical Park**, Richmond, Texas Artistic & practical forging. Production of charcoal.

Education

Math PhD Student Sep. 2018 - COVID19	**The University of Houston** TA - Calculus, RA - Numerical Methods *Num. Analysis (B+), Optimization I/II (B,A-), Probability (A)*
MS in Mathematics Sep. 2015 - Aug. 2018	**The University of Houston-Clear Lake** TA - Algebra, RA - Model Predictive Control *Finite Elements (A), Comp. Physics (A), Electrodynamics (B)*
BS in Mathematics Sep. 2012 - May 2014	**Houston Baptist University** *Diff. Geometry (A), Complex Variables (B), Real Variables (B)*

Tech Experience

Coding:	C/C++, Bash/Batch, Python, Scheme, Git, CMake, MATLAB, LaTeX, etc.
Drafting:	Autodesk Inventor, AutoCAD Mechanical, CADWorx, Intergraph Smart 3D
General:	Vim, Markdown, Ham Radio, Microsoft Office, Fluent with Linux & Windows

Research Interests

Leveraging math and modern technology for:	Fabrication Methods, Biochemical Dynamics, Wastewater Mitigation, Wireless Communication, Optimization & Control, Conductive Fluids

Publications

Yipeng Yang and Neal Nesbitt. "Concise iterative algorithms on the state feedback form for model predictive control and stability analysis of discrete linear systems". In: *2017 IEEE Symposium Series on Computational Intelligence* (Honolulu, Hawaii, Nov. 27, 2017). IEEE, 2018, pp. 2130–2133. ISBN: 9781538627259

Neal David Nesbitt. "Fundamentals of axis-symmetric boundary reconstruction for ideal tokamak plasmas: Using toroidal harmonics to match poloidal flux measurements in the surrounding vacuum." MA thesis. The University of Houston-Clear Lake, 2018. ISBN: 978043841249