Sergio Maconda – ITASCA Minneapolis

Senior Software Engineer II

Expertise

Finite Element Analysis (FEA), High-Performance Computing (HPC), Computational Mechanics, Cloud Computing, Machine Learning, Additive Manufacturing, Computer-Aided Engineering (CAE), Deep Learning, Artificial Neural Networks (ANN), Mechanical Simulation, Message Passing Interface (MPI), CUDA, GPU, OpenMP, Structural Analysis, Software Development, Composites, International Management, Project Management, Operations Management, Operations Research, Optimization, Hard Disk Drives, Biomechanics, Soft Tissue, User Experience Design

Education

Doctor of Philosophy (Mechanical Engineering), 2007
University of Pittsburgh, Pittsburgh, PA, USA

Master of Business Administration, 2012
University of California at Irvine, Irvine, CA, USA

Professional Experience

2022 – Present	ITASCA Minneapolis Senior Software Engineer II
2020 – 2021	Rescale, San Francisco, California Senior Application Engineer / Solutions Architect
2019	Raylytyc, Leipzig, Germany Softwareentwinkler
2014 – 2019	Autodesk, San Francisco, California and State College, Pennsylvania User Experience Designer and Research Engineer
2011 – 2014	NEi Software, Westminster, California Senior Application Engineer and International Channel Manager
2007 – 2009	Western Digital, San Jose, California Principal Engineer
2003 – 2007	Ansys, Inc., Canonsburg, Pennsylvania Quality Assurance Engineer

Project Experience

Deep Learning in Healthcare: Led the development of AI-based tools for medical image registration, segmentation and analysis.

High-Performance Computing in Additive Manufacturing Simulation: Developed an MPI version of a commercial additive manufacturing simulation code (Autodesk Netfabb).

Mesh-independent Cracking (MIC): Developed MIC finite elements that allow simulation of crack propagation (delamination and transverse matrix cracks) in composite materials independent of finite element mesh.