

Hui (Michelle) Sun, Ph.D.

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EDUCATION

University of California – Berkeley	Jan 2019 – Aug 2020
• M.S., Data Science – GPA 3.96/4.0	
University of Minnesota in Twin-Cities, Minneapolis, Minnesota	Aug 2008 – May 2012
• Ph.D., Chemical Engineering	
Nanyang Technological University, Singapore	Aug 2004 – Aug 2008
• B.S., Chemical Engineering – GPA 3.9/4.0	

PROFESSIONAL EXPERIENCE

DuPont de Nemours, Inc, Sunnyvale, CA	Feb 2018 – Present
<u>DuPont Global R&D Leader – Data Science/Machine Learning/AI</u>	
• Lead a team of 6 data scientists. Understand Business’s technical strategy and develop/execute the AI/Machine Learning (ML) strategy to support business roadmap for DuPont. Understand the newest ML/Data Science technology & state-of-the-art models.	
• Work on 15+ Product Commercialization Framework (PCF) projects using ML, boosting new product development, and increasing organic growth with an estimated business impact of \$50+ million . Work on computer vision and lab automation projects which have the total estimated business impact of \$20-30 million .	

Electronics & Industrial (E&I) Global Data Science Leader

- Provided technical management for Global Data science team. Led a team of 9 data scientists and data engineers. As of 2023, the ongoing Data Science and ML projects total around **40+**. Collaborated with five R&D centers and multiple manufacturing sites.
- Worked with business units (BU) to identify new high-business-impact projects. In the second half of 2023, evaluated the Laird and Industrial Solution BU, resulting in six more DS projects with multi-million dollars potential revenue.

Machine Learning/Data Science Leader

- Utilized lab data/machine learning to expedite current R&D process and improved lab/work efficiency.
- Designed, prototyped, and developed DuPont futuristic SmartLab in Silicon Valley, and incorporated LIMS System.

PNC FINANCIAL SERVICES, Pittsburgh, PA

Model Development: Assistant Vice President (AVP) Dec 2016 – Jan 2018

- Conducted end-to-end development and validation of various statistical or machine learning models, including logistic and regression models for predicting bank cash flow reserves, through data sourcing, preparation, and mining techniques such as clustering.

AIR LIQUIDE, Newark, DE

Research Scientist April 2013- March 2016

- Conducted statistical DOE and performed statistical analysis to improve technology confidence level for customers. Also built engineering labs for semiconductor process research program and improved Plasma etching efficiency using LabView by 15-20%

GENERAL ELECTRIC - GLOBAL RESEARCH CENTER, Schenectady, NY

Research Scientist Sep 2012 – April 2013

- Led DOE efforts using MiniTab® to minimize research costs and optimize product performance. Also led water treatment product development efforts as technical leader, including experiment design and data analysis.

PUBLICATIONS, PATENTS AND PRESENTATIONS

- Hui (Michelle) Sun, “Machine Learning/AI Applications at DuPont”. SEMICON west TechTalk, July 2024 (expected)
- Hui (Michelle) Sun, Invited Machine Learning Technical Seminar, National Taiwan University (NTU), May 31, 2024 (expected)
- Hui Sun et al. HYDROFLUOROCARBONS CONTAINING –NH₂ FUNCTIONAL GROUP FOR 3D NAND AND DRAM APPLICATIONS, American Air Liquide, United States Patent Application 20190131140, 2019
- Hui Sun, Corey Rosenthal, Lanny D. Schmidt, “Oxidative pyrolysis of polystyrene into styrene monomers in an autothermal fixed-bed catalytic reactor”, ChemSusChem, 5, 1883-1887, 2012.
- Hui Sun, Samuel Blass, Edward Michor, Lanny D. Schmidt, “Autothermal reforming of butanol to butenes in a staged millisecond reactor: Effect of catalysts and isomers”, Applied catalysis A: General, 445-446, 35-41, 2012.
- Hui Sun, Lanny D. Schmidt, “Methanol dehydration to dimethyl ether in a staged autothermal millisecond residence time reactor”, Applied catalysis A: General, 404, 81-86, 2011. [For other publications, please refer to LinkedIn profile.](#)

AWARDS/HONORS/LEADERSHIP

• DuPont CARE team core member & DuPont Women in IT (WiIT) Core Team	2021 - present
• University of California Berkeley Data Science Program Fellowship	2019-2020
• Co-lead for Women’s Network in Delaware Research and Technology Center (DRTC)	2013-2016
• NTU Chemical engineering Dean’s list & UoM Department Fellowship	2004-2009