

# Hao Chen

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CONTACT INFORMATION	West Lafayette, IN, USA <a href="#">Google Scholar</a> <a href="#">Homepage</a>	<a href="mailto:chen4433@purdue.edu">chen4433@purdue.edu</a> <a href="#">Linkedin</a>
EDUCATION	<b>Purdue University</b> , West Lafayette, IN Ph.D. in Chemical Engineering <ul style="list-style-type: none"><li>• Research advisor: Dr. <a href="#">Can Li</a></li><li>• Research expertise: Machine Learning and Mathematical Optimization</li></ul> <b>University of Cambridge</b> , Cambridge, UK M.Phil. in Chemical Engineering and Biotechnology  <b>University of Nottingham</b> , Nottingham, UK B.Eng. in Chemical Engineering	2022 - Present      2021  2020
APPOINTMENTS	<b>Cornell Tech, Cornell University</b> , New York, NY, USA <i>Visitor researcher</i>	TBD 2025 Prof. <a href="#">Andrea Lodi</a> 's Lab
PUBLICATIONS	<p>[1] <b>Chen, H.</b>, Constante-Flores, G., Li, C. Physics-informed neural networks with hard linear equality constraints. <i>Computers &amp; Chemical Engineering</i> 189, 108764. (2024).</p> <p>[2] <b>Chen, H.</b>, Constante-Flores, G., Li, C. Diagnosing Infeasible Optimization Problems Using Large Language Models. <i>INFOR: Information Systems and Operational Research</i>, 1–15. (2024).</p> <p>[3] Yan, Y., Shin, W.I., Chen, H. et al. A recent trend: application of graphene in catalysis. <i>Carbon Lett.</i> 31, 177–199 (2021).</p>	
CONFERENCE PRESENTATIONS	<p>Chen, H. 2024. Self-supervised Learning for Constrained Optimization with Hard Linear Constraints. Paper presented at the 2024 <i>INFORMS Annual Meeting</i>, Seattle, WA</p> <p>Chen, H. 2024. GPU Accelerated Approximation Algorithm for Multi-Parametric Linear Programming. Paper presented at the 2024 <i>AIChE Annual Meeting</i>, San Diego, CA</p> <p>Chen, H. 2024. Physics-Informed Neural Networks with Hard Linear Equality Constraints. Paper presented at the 2024 <i>AIChE Annual Meeting</i>, San Diego, CA</p> <p>Chen, H. 2024. Diagnosing Infeasible Optimization Problems Using Large Language Models. Paper presented at the 2024 <i>AIChE Annual Meeting</i>, San Diego, CA</p>	
HONORS AND AWARDS	Nottingham Engineering Excellence Scheme (Top 1.0%), University of Nottingham British Petroleum Prize, University of Nottingham Provost's Scholarship (Top 1.5%), University of Nottingham Dean's Scholarship (Top 10%), University of Nottingham	2019 2019 2018 2017
RESEARCH MENTORING	Zachary Rasmussen (Undergraduate from Utah) Rahul Golder (Undergraduate from IIT) Soumick Sarker (Undergraduate from IIT)	2024 - Present 2023 - 2024 2023 - 2024

TEACHING	<i>Statistical Modeling and Quality Enhancement (CHE-32000), TA</i>	Fall 2024
EXPERIENCE	<i>Momentum Transfer (CHE-37700), TA</i>	Fall 2023
SKILLS	<ul style="list-style-type: none"> <li>• Programming: Python, Julia</li> <li>• Frameworks: NumPy, Pandas, PyTorch, SciPy, TensorFlow</li> <li>• Toolbox: Linux, vim, git</li> </ul>	