

# Leila Azimian, PhD, MBA, PEng

## Personal Competencies

### Energy and Drive

- Energy
- Ambition
- Leadership
- Social Confidence
- Persuasion
- Flexibility

### Working with Others

- Dependability
- Rule Following
- Attention to Detail
- Planning

### Problem-Solving Style

- Innovation
- Analytical Thinking

### Dealing with Pressure and Stress

- Self-Control
- Stress Tolerance

### Special

- Managerial and Leadership Potential
- Sales Potential

## Professional Skills

- **Languages:** English (Fluent), Persian (Native), French (Elementary), German (Elementary), Arabic (Intermediate)

- **Software Proficiency:** MS Office (Project, PowerPoint, Word, Excel), Statistical Data Analysis (Pascal, R, Python, Minitab, SPSS, Design-Expert® Software), CATIA, Mechanical Desktop, SAP
- **Computer Literacy:** Learning Management Systems (Quercus, Blackboard, Owl, Fol)

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## Education

- **Postdoctoral Research in Biomedical Engineering**  
**Institution:** University of Toronto, London, ON, Canada  
**Project:** Investigating the effects of Ceylon cinnamon water extract on HepG2 cells for Type 2 diabetes therapy
- **Ph.D. in Chemical & Biochemical/Environmental Engineering**  
**Institution:** Western University, London, ON, Canada  
**Thesis:** Bioremediation of petroleum desalter effluent using yeast and microalgae
- **M.Eng. in Chemical & Biochemical/Environmental Engineering**  
**Institution:** Western University, London, ON, Canada
- **MBA (Master of Business Administration)**  
**Institution:** Tehran University, Tehran, Iran  
**Thesis:** Key Success Factors in Designing Teleworking Employment: A Case Study of the Staff of Renault Representative IKCO
- **B.Sc. in Chemical Engineering**  
**Institution:** Iran University of Science and Technology, Tehran, Iran

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## Certificates

- **Clean Technology - Work-Integrated Learning Project**  
**Institution:** Uvaro, Guelph, ON, Canada
- **Biomanufacturing**  
**Institution:** CASTL AdMare Academy | nibrt, Charlottetown, PEI, Canada
- **Marketing in Sales - Punctual Spiders**  
**Institution:** Uvaro, Guelph, ON, Canada

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## Professional Experiences

Arbor | Carbon Accounting Platform (June – October 2024)

- **Work-Integrated Learning Project:**

- Developed optimized sales cadences to engage sustainability professionals through cold outreach and email campaigns.
- Collaborated with cross-functional teams to improve sales outreach and conversion rates in the carbon capture and sustainability industries.

### **University of Toronto, Toronto, ON (January 2021 – April 2024)**

- **Member of Bargaining Committee, Canadian Union of Public Employees (CUPE 3902):**
  - Encouraged members to review the collective agreement, focusing on Social and Environmental Justice principles and alignment with the UN Sustainable Development Goals (SDGs).
- **Sessional Lecturer - Arts and Applied Science:**
  - Taught courses in the Academic Bridge Program in the Sciences.
  - Designed course materials, quizzes, assignments, and exams.
  - Employed teaching strategies like scaffolding to support student research papers.
- **Sessional Lecturer - Engineering and Applied Science:**
  - Supervised teaching assistants and delivered lectures in Engineering Finance, Accounting, and Economics.
- **Research Engineer - Physical Therapy:**
  - Conducted state-of-the-art research on data sets of individuals surviving brain injuries.
  - Explored the use of computer vision and machine learning for movement analysis.
- **Postdoctoral Researcher, Mechanical and Industrial Engineering:**
  - Led a Mitacs-funded research project comparing the effects of Ceylon cinnamon extract and Metformin for type 2 diabetes therapy.
  - Designed and analyzed experiments using R software and next-generation sequencing data.
  - Collaborated with industry partners and produced reports for product license applications with Health Canada.

### **Trent University, Durham, ON (September 2020 – December 2022)**

- **Sessional Lecturer - Mathematics Department:**
  - Instructor for non-calculus-based statistics courses.
- **Lab Demonstrator/Workshop Leader:**
  - Delivered seminars, workshops, and labs in various math courses, both virtually and on-campus.

### **Western University, Imperial Oil, London, ON (2015 – December 2020)**

- **PhD Research Assistant in Biochemical-Environmental Engineering:**
  - Led research on bioremediation techniques for wastewater treatment, collaborating with Imperial Oil.
  - Utilized advanced statistical analysis, Design of Experiments (DOE), and bioinformatics tools.
  - Published findings in peer-reviewed journals and presented at international conferences.
- **Teaching Assistant - Engineering, Mathematics, and Biology Departments:**
  - Assisted with undergraduate and graduate courses, including plant design, applied mathematics, and risk assessment.

### **City of Markham, ON (March – August 2022)**

- **Education Consultant - Recreation Center:**
  - Managed candidate data and interviewed over 300 students for camp counselor positions.
  - Maintained pricing for services and facilitated the hiring process.

## Fanshawe College, London, ON (September – December 2020)

- **Part-Time Professor - Environmental Science:**
  - Taught introductory courses in environmental technology and hydrology to third-year engineering students.

## Terraprobe Inc., Brampton, ON (January – March 2020)

- **Environmental Engineer Intern (EIT):**
  - Prepared environmental assessment reports based on geological and hydrological data.
  - Supervised site remediation projects, ensuring compliance with environmental regulations.

## IKCO Car Manufacturing, Tehran, Iran (August 2004 – November 2013)

- **Lead Paint Process Improvement Engineer, Production Engineer:**
  - Managed the startup of new paint lines and implemented quality management systems.
  - Led efforts in lean manufacturing, Six Sigma, and cost-saving initiatives.
  - Collaborated with cross-functional teams to improve process efficiency and product quality.

## Bio-Stat-Green Consulting, Vaughan, ON (April 2020 – Present)

- **Founder & Entrepreneur:**
  - Developed a continuous photobioreactor for carbon capture and oxygen production using microalgae (patent pending).
  - Led a startup company focused on sustainability innovations, securing grants and participating in entrepreneurial programs.
  - Filed a patent for a microalgae-powered photobioreactor patio umbrella in September 2023.

## Consulting & Tutoring (Remote, Canada & USA)

- Designed 150 questions for Six Sigma Black Belt certification preparation within a 6-week timeline.
- Provided remote tutoring for undergraduate courses in statistics, mathematics, and Six Sigma methodology.

## Awards & Grants

- **Lab2Market Oceans Mitacs program grant (2025) | \$14,000**
- **Fulbright Canada Scholar Award Candidate (2024-2025)**
- **Ocean Idea Challenge (2024) | \$7,000**
- **IPON IP Bootcamp (2024) | \$35,000**
- **ICUBE Entrepreneurship Award (2023) | \$450**
- **Canada Digital Adoption Program (CDAP) - Grow Business Online (2023) | \$2,400**
- **Lab Tourism Innovation Idea Winner (2022) | \$3,000**
- **Mitacs Accelerate Award (Fall 2020) | \$25,000**
- **Recognized Top Downloaded Paper (2018-2019)**
- **Winner of Industrial Problem-Solving Competition (2014)**

- **E.G.D. Murray Scholarship in Microbiology** (*Winter 2017 and 2019*) | \$3,000
- **Queen Elizabeth II Graduate Scholarship** (*2018*) | \$18,000
- **Imperial Oil Grant** for PhD Project Research (*2015-2019*) | \$50,000
- **Paint Production Engineering Management's Employee of the Year Award** (*2009*) | Gold Coin \$600
- **Best Chemical Engineering Thesis Project Award**, Iran University Science & Technology Festival | Gold Coin \$600

## Research Publications & Intellectual Property

- **Inventor:** *Sustainable Photobioreactor* – PCT Patent Application No. 30756-P75128PC00 (Filed May 3, 2024)
- **Inventor:** *Design and Building of Mobile/Portable Photobioreactor (Aquarium of Microalgae) in the Shape of Patio Umbrella*, Industrial Design Application No. 224014
- **Publications:**
  - *Investigating the Effects of Ceylon Cinnamon Water Extract on HepG2 Cells for Type 2 Diabetes Therapy*, L. Azimian et al., Cell Biochemistry & Function Journal
  - *Investigation of Growth Kinetics of Debaryomyces Hansenii (LAF-3 10 U) in Petroleum Refinery Desalter Effluent*, L. Azimian, A. Bassi, SM Mercer, The Canadian Journal of Chemical Engineering
  - *Response Surface Methodology (RSM) Modelling to Improve n-Dodecane Degradation Using Debaryomyces Hansenii LAF-3*, L. Azimian, The Canadian Journal of Chemical Engineering
  - *Continuous Cultivation of Debaryomyces Hansenii (Laf-3 10 U) at Varying Dilution Rates on Dodecane*, L. Azimian, Water and Environment Journal
  - **Ph.D. Dissertation:** *Bioremediation of Refinery Desalter Effluent Using Debaryomyces Hansenii & Parachlorella Kessleri*
  - **EMBA Final Project:** *Key Factors in the Success of Remote Working in IKCO (Car Manufacturing Company)*
  - *Reduction of Phosphate Sludge in Automotive Surface Pretreatment Industry*, Surface Coating Magazine
  - *Investigation on Rubber Pad Dies and Rubber Properties in Producing Large Sheet Metal Parts*, Proceeding, 8th International Pacific Congress on Manufacturing and Management

## Conferences, Presentations, and Workshops

- **Oral Presentation:** "Doses of Innovation: Driving Carbon Removal and Oxygen Production in Tourism," IMPACT Sustainability Travel & Tourism Conference, Ontario, May 6, 2024
- **Showcase:** Tourism Vaughan Industry Networking Event, December 6, 2023
- **Showcase:** Clean Technology Conference, November 22, 2023

- **Oral Presentation:** Investigation of Growth Kinetics of *Debaryomyces Hansenii* in Petroleum Refinery Desalter Effluent, 2018
- **Oral Presentation:** 184b - Investigation of Hydrocarbon Utilization by *Debaryomyces Hansenii* in Desalter Effluent, 2019
- **Poster Presentation:** Water Management by Microalgae Remediation, 2016
- **Oral Presentation:** Key Success Factors in Designing "Teleworking Employment: A Case Study of the Staff of Renault", 2012
- **Oral Presentation:** Optimizing the Coating Weight in Automotive Paint Shop, 2010
- **Workshop Presentation:** Pre-treatment Startup of Newly Established Paint Line, 2008
- **Poster Presentation:** Reduction of Phosphate Sludge in Automotive Surface Pretreatment Industry, 2007
- **Oral Presentation:** An Investigation on Rubber Pad Dies and Rubber Properties in Producing Small Sheet Metal Parts, 2003

## Conference Participation and Professional Development

- **Sustainable Engineering Conference**  
*October 30, 2024*  
Attended the Sustainable Engineering Conference, focusing on innovative solutions for environmental challenges. Engaged in customer discovery and validation research for my decarbonization initiative.
- **Teaching and Learning Symposium**, University of Toronto  
*May 22-23, 2024*  
Participated as a sessional lecturer, attending sessions on innovative teaching practices and discussions on evolving classrooms and learning environments.
- **Smart Growth Symposium**, University of Toronto  
*October 10, 2024*  
Attended as part of my initiative project for decarbonization. Engaged in discussions and workshops focused on sustainable urban development and strategies for reducing carbon emissions.

## Projects

### Academic Projects

- **Study of Key Success Factors in the Design and Implementation of "Teleworking Employment"**  
*M.Sc. Thesis, 2011, University of Tehran and Renault (IKCO)*  
Conducted a case study on Renault staff to identify key success factors in teleworking employment.
- **Design of a Biogas Reactor for Refinement of Residential Complexes Wastewater**  
*B.Sc. Final Project, Tehran, Iran*  
Designed a biogas reactor to treat wastewater from residential complexes.

## Industrial Projects

- **Recycled Phosphate Bath Sludge to Cement**  
Recycled 20 tons per week of phosphate bath sludge containing toxic metals (Ni, Zn) into cement.
- **Optimization of De-sludge Material Consumption in Renault Paint Shop**  
Optimized the consumption of de-sludge material in the paint shop to improve efficiency.
- **Treatment of Waste Paint Sludge and Evaluation of Usages as Building Material Fillers**  
Treated waste paint sludge and evaluated its potential use as building material fillers.
- **Installation of De-sludge System in New Paint Shop**  
Installed a system for removing paint particles from the paint spray booth in a new paint shop.
- **Installation of Pre-refinement System for Paint Shop Wastewater**  
Installed a pre-refinement system to reduce contamination levels in paint shop effluent.
- **Improvement of Phosphate Coating Weight in Paint Shop**  
Managed a project to improve the phosphate coating weight in the paint shop.
- **Installation and Setup of Switch Level for Phosphate Bath System**  
Installed and set up a switch level system to maintain the height of the phosphate tank and ensure product quality.
- **Feeding Over of Phosphate Materials in Phosphate Dump Tank**  
Managed the feeding over of phosphate materials in the phosphate dump tank.
- **Installation and Setup of Washing System for Press Filter Plates**  
Installed and set up a washing system for the press filter plates in the paint shop.
- **Optimization of DI Water Consumption in Paint Shop**  
Managed a project to optimize deionized water consumption in the paint shop.
- **Startup of Production in New Paint Shop 3 (PT & ED Modules) at IKCO**  
Started up production of car bodies in a newly established paint shop.
- **Optimization of Bag Filter Consumption in ED Module (IKCO)**  
Optimized the consumption of bag filters in the ED module, resulting in cost reduction.

## Cost-Saving and Energy-Saving Projects (*IKCO, Tehran, Iran, 2004 - Nov 2013*)

- **Optimization of Phosphate Coating Weight**  
Increased product quality by optimizing the phosphate coating weight in the paint shop.
- **Inventory and Chemical Consumption Management**  
Monitored inventory levels and decreased chemical consumption by 30% while maintaining product quality.
- **Localized Supply Chain for PT Material**  
Localized the supply chain for PT material, saving \$500,000 per year.
- **Improved Cleaning Processes**
  - Reduced degreasing material consumption from 2.7 to 1 kg per body, saving \$150,000 per year.

- Reduced deionized water consumption from 4 to 1.7 kg per body, saving \$60,000 per year.
- **Optimization of Electro Deposition Process**  
Decreased bag filter consumption, saving \$150,000 per year.
- **Optimization of De-sludge Material Consumption**  
Reduced de-sludge material consumption from 500 to 100 g per vehicle, saving \$200,000 per year.

## Recycling Initiatives

- **Recycling Phosphate Sludge Waste**  
Recycled 5 tons per week of phosphate sludge waste into cement blocks.
- **Recycling Coagulated Paint**  
Recycled coagulated paint from the de-sludge process as mortar.

## Installation Projects

- **De-sludge System Installation**  
Installed a de-sludge system in the new paint shop.
- **Pre-refinement System Installation**  
Installed a pre-refinement system to reduce contamination in paint shop effluent.
- **Phosphate Tank Level-Switch Installation**  
Installed and set up a level-switch system in phosphate tanks.
- **Washing System Setup for Press Filter Plates**  
Replaced and set up the washing system for press-filter plates in the paint shop.

## Volunteer Experience

- **Department Steward**, Woodworth College, Art & Science, CUPE3902 (2024-2025)
- **Peer-Reviewer**, Various Journals (2023-Present)
  - GENE Journal
  - The Canadian Journal of Chemical Engineering (CJCE)
  - Biochemical Engineering Journal (BEJ)
- **Member**, Discovery Series: An Exploration of Curricular and Co-Curricular Initiatives to Advance Equity, Diversity, Inclusion, and Access
- **Member**, PEO's 2050 Visioning Process Advisory Group (2023), Professional Engineering Ontario
- **Judge**, Bioengineering at Computer Science Research Presentations and Posters (Aug 17, 2022), 2022 Undergraduate Engineering Research Day (UnERD), University of Toronto, ON
- **Member**, Central Election and Search Committee of Professional Engineering Ontario (2021-Present)
- **Graduate Engineering Student Counselor** (2017-2018), Western University, London, ON, Canada

- **President**, Chemical & Biochemical Engineering Graduate Students (CBEGS) (2017-2018), Western University, London, ON, Canada
- **Volunteer**, Science Rendezvous Fair for Youth (2017), Western University, London, ON, Canada
- **Volunteer**, Go ENG Girl Workshop for Youth (2017), Western University, London, ON, Canada
- **Volunteer**, Reforest London Planting (2016), London Park, London, ON, Canada
- **Volunteer**, Victorian Order of Nurses (VON) (Summer 2015), London, ON, Canada

## Professional Memberships

- **Member**, Climate Positive energy, University of Toronto 2024
- **Member**, Discovery Series: An Exploration of Curricular and Co-Curricular Initiatives to Advance EDI and Access
- **Member**, Professional Engineering Ontario (100190037) (2015-Present)
- **Member**, Ontario Society of Professional Engineers (OSPE) (2014-2019)
- **Member**, Society of Graduate Students at Western University (2018-2019)
- **Member**, PSAC Local 610 Researcher and Teaching Assistants in Western Ontario (2015-2019)
- **Member**, Campus Communicator Centre (Toastmasters) at Western University (2016-2019)
- **Member**, Reforest London Planting at London Park (2015-2016)
- **Member**, Health and Safety Committee at Peugeot (2003-2004)
- **Member**, Quality Management Committee at Renault (2003-2004)
- **Member**, Professional Painting Training Committee at Renault (2004-2007)

## Training and Certificates

- **Marketing in Sales - Punctual Spiders**, Uvaro Academy
- **Clean Technology and Sales Development**: Uvaro Academy
- **Biomanufacturing in Canadian Healthcare System**: CASTL AdMare Academy, Charlottetown, PEI
  - Bioeconomy Essential Skills: Communication, Document Use, Reading, Problem Solving, Numeracy, Collaboration
  - Scientific Report Writing, GLP, GMP, QA/QC, GCP
- **Teaching Development Classes**: University of Toronto
- **Course Design in Innovative Teaching**
- **Certificate**: "Curriculum, Teaching, and Learning in the STEM Disciplines"
- **Advanced Teaching Program (ATP)**
- **Leadership**: Developing Leader Character, and Business Acumen, Engineering Planning and Project Management
- **Certificates**: Laboratory – Environmental Waste Management Safety, Workplace Hazardous Materials Information System, Biosafety

- **GMP Certifications:** Good Clinical Practice (GCP), Good Laboratory Practice (GLP), Good Manufacturing Practice (GMP), Quality Assurance and Quality Control (QA/QC), Scientific Report Writing Fundamentals (Bio Talent Canada)
- **Six Sigma:** LinkedIn Learning
  - Courses: Banking Analytics (Python), Regression (R), Financial Math Options, Risk Management
- **PMP® Certification Training Course:** Mitacs
- **Developing Leader Character:** Ivey Business School at Western University

## Professional Recognition

- **Community-Engaged Learning Contribution Acknowledgment:** University of Toronto (2023-2024)  
Recognized by the Centre for Community Partnerships for significant contributions to community-engaged learning (CEL), enhancing educational experiences, empowering students, and strengthening academic-community ties.
  - Commended for active participation in the CRIS/CCP Community-Engaged Research Faculty Discussion Club sessions, demonstrating a commitment to collaborative research approaches that foster trust and reciprocity.

## Certifications, Workshops, and Professional Development

- **Teaching and Learning Symposium:** "What is a Classroom?" - University of Toronto (May 22, 2024)
- **ACUE Lunch and Learn Certificate** (January 2024)  
Participated in a session on "Using Your Syllabus as a Roadmap to Learning: Strategies to Enable Reflection and Engagement"
- **Arts & Science Teaching & Learning Showcase:** University of Toronto (May 1-2, 2023)
- **ACUE Lunch and Learn Series - Pedagogy of Care: Community Building Practices** (March 2024)
- **Creating an Equitable Classroom Roundtable** (October 2023)
- **Creating Inclusive Learning Environments Workshop** (October 2023)
- **CTSI Equity Roundtable - Teaching for Change: Decolonizing Through Stories** (February 2024)
- **Demystifying the Dossier: Drafting Your Statement of Teaching Philosophy** (February 2024)
- **Demystifying the Dossier: Preparing Your Teaching Dossier Workshop** (April 2024)
- **Designing a Scholarship of Teaching and Learning (SoTL) Project** (October 2023)
- **EDI and Academic Freedom in the Classroom Workshop** (February 2024)
- **Workshop on Effective Strategies for Preparing a Teaching Award Nomination File** (November 2023)
- **Equity and UDL: Centering the Learner and Fostering Academic Resilience** (January 2024)
- **Equity Roundtable: Who Are Our Students?** (February 2024)
- **Equity Roundtable: Engaging with Indigenous Knowledges and Pedagogies in the Postsecondary Class** (November 2023)

- **Generative AI Works in Progress Series: Cultivating Discernment in Skill Development in Using ChatGPT** (February 2024)
- **Introduction to the Academic Toolbox Workshop** (January 2024)
- **Monitor-Side Chats: UDL-ing in Winter 2024 - UDL Guideline 1: Perception (Building Engagement)** (February 2024)
- **UDL Guideline 5: Expression & Communication (Internalizing Representation)** (March 2024)
- **UDL Guideline 8: Sustaining Effort & Persistence (Accessing Representation)** (February 2024)
- **UDL Guideline 9: Self-Regulation (Accessing Action and Expression)** (March 2024)
- **Tune into Teaching: Building, Managing and Supporting Your Teaching Team of TAs** (August 2023)
- **Making Your Syllabus Work for You and Your Students** (August 2023)
- **QuickStart Quercus** (August 2023)
- **Setting the Tone for Success: The First Day of Class and Beyond** (August 2023)

## Peer Observations of Teaching

- **Professional Observations: Faculty Mentoring for Teaching**
  - Observed by Dr. Liat Naeh, Sessional Instructor II, Department of Visual Studies, University of Toronto, Mississauga (February 14, 2024)
  - **Feedback:** Received commendation for dedication to student success, effective teaching strategies, and the creation of a supportive learning environment in the ABP101: Introduction to Academic Studies in the Sciences class.