



## RAHI AVAZPOUR

- Montréal, Quebec, H8Z 1V4
- Phone: 514-340-4711 Poly ex. 4272 Email : [Rahi.Avazpour@polymtl.ca](mailto:Rahi.Avazpour@polymtl.ca)

### EDUCATION

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Sep 1995 - Sep 1999	<b>Mechanical Engineering, 4 years B.Sc,</b>	<b>Tehran University</b>
Jun 2000 - Sep 2008	<b>Technical Training Center</b> Same as : Engines Emission control, CNG , Multi fuel systems GB/AGB, ... <b>Technical program:</b> including 18 months for special courses	<b>ITTC</b>
Sep 2008 - Aug 2009	<b>Quality management and standardization</b> ISO ( 9000-9001-9002- 14000,18001 ) , QS , QC OHSAS , QA	<b>IMO</b>
Jan2011- April2014	<b>Master program,</b> “Chemical engineering department – Energy and Sustainable Development	<b>Ecole Polytechnique de Montréal</b>
May 2014- in progress	<b>Ph.D. program,</b> “ Chemical engineering department ”	<b>Ecole Polytechnique de Montréal</b>

### EXPERTISE

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- Detection and analysis techniques: XPS, GC-MS, GC-FID, FTIR, TGA
  - Microwave rotational heating and pyrolysis, Mixing and emulsification lab. setup
  - Experimental design, statistical analysis and data processing
  - Simulation and modeling: COMSOL, Simulink, Aspen plus, TRANSYS, RETScreen, HOMMER
  - Microscopic analysis and Image processing
  - Quality management: QA, QC, FMEA, ISO
  - Teaching technical courses for over a decade at ITTC



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### WORK EXPERIENCE

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#### *Technical Expert*

July 1999 - Apr 2005

- Energy efficiency modification for HVAC systems;
- Test plan preparation for engines adaptation;
- System optimization;
- Diagnosis operations;
- PM & Calibration program for laboratory equipments;

Apr 2005- July 2010

- Scale up engine emission control test stations for industrial mass production, various fuel systems modification using electrical multiplex systems;
- Develop analytical solutions for technological problems in the various engine fuel systems and catalytic convertor;
- Monitoring emission control methods;
- Industrial inspection including efficiency, environmental and safety considerations;
- Industrial and laboratory scale up of engine emission control standardization;
- Design/modification of multi-fuel system for low compress engines;
- Concurrently scale up engine management system, data acquisition, efficiency modification;

### RESEARCH SKILLS

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#### *Ph.D. program*

May 2014- 2018

- Pickering emulsification, demulsification and phase separation and application of Pickering emulsion in mineral beneficiation as an industrial Ph.D. research project
- Rare earth elements REE's mineral physicochemical and surface properties
- Mineral processing and physical beneficiation, conventional froth flotation
- Size analysis technique to investigate emulsification and phase separation in laboratory scale

#### *Master program M.Eng*

Jan 2011- April 2014

- FTIR multi-gas measurements and the cross interferences uncertainties;
- Pyrolysis at laboratory scale used for a research project to development Pyrowave technique;
- Various energetic concepts used for sustainable development aspects of an industrial projects: (Geothermal design, solar panels, wind turbines, electrochemical and fuel cells, waste residual energy, bio-fuel and bio-refinery, energy efficiency and sustainable design)