

### 3. Theses/Projects Supervised

#### I. Postdoctoral/Visiting Scholars

- PD8. Vincent Denarie, Visiting Scholar (Sole supervisor), Ontario Tech, Oshawa, June 2019-December 2019.  
*Research:* Development of aerodynamic devices to soiling mitigation
- PD7. Kacper Kowalski, Visiting Scholar (Sole supervisor), Ontario Tech, Oshawa, June 2019-December 2019.  
*Research:* Development of aerodynamic devices to soiling mitigation
- PD6. Shabnam Pejhnian, PDF (Sole supervisor), UOIT, Oshawa, April 2019- .  
*Research:* Experimental design and testing of e-bike riding scenarios and testing
- PD5. Giulio del Giudice, Visiting Scholar (Co-supervising with Dr. Marc Rosen, FEAS), UOIT, Oshawa, April 2019-August 2019.  
*Research::* Comparative techno-economic analysis of energy utilization
- PD4. Sylvester S. Djokoto, Visiting Fellow (Sole supervisor), UOIT, Oshawa, August 2018- December 2019.  
*Research:* Application of smart fluids for energy harvesting
- PD3. Stan Kuipers, Visiting Scholar (Sole supervisor), UOIT, Oshawa, November 2017- April 2018  
*Research:* Data analysis of e-bike testing and validation
- PD2. Qi Wang, Visiting Fellow (Sole supervisor), UOIT, Oshawa, August 2016 – March 2017  
*Research:* Electro-mechanical integration of test facilities
- PD1. Samane Ghandehariun, PDF (Co-supervising with Dr. Marc Rosen, FEAS), UOIT, Oshawa, November 2015 – December 2016.  
*Research:* Thermal hydraulics and the integration of the Cu-Cl cycle for hydrogen production.

#### II. Doctoral Students

- D7. Seham Shahid, PhD (Sole Supervisor), UOIT, Oshawa, May 2020 –

Thesis title: Innovative thermal management techniques for electric batteries

- D6. Andre Bolt, MSc (Co-Supervisor with Dr. Ibrahim Dincer, FEAS), UOIT, Oshawa, January 2020 –

*Thesis title:* Design and Development of a Synthetic Natural Gas Reactor

- D5. Wing Yi Pao, PhD (Sole Supervisor), UOIT, Oshawa, September 2019 –

Thesis title: Mitigating soiling on autonomous road vehicle sensors

- D4. Naseeb Siddiqui, PhD (Sole Supervisor), UOIT, Oshawa, January 2019 –

Thesis title: Nature inspired aerodynamic devices for vehicles

- D3. Shaimaa Seyam, PhD (Co-supervising with Dr. Ibrahim Dincer, FEAS), UOIT, Oshawa, September 2018 –

Thesis title: Analysis of integrated sustainable energy systems

- D2. Satyam Panchal, PhD (Co-supervising with Dr. Ibrahim Dincer, FEAS), UOIT, Oshawa, May 2014 – December 2016.

*Thesis title:* Thermal characterization of new lithium-ion battery and their utilization in experimental electric vehicle settings.

- D1. Mohammed Abdulrahman, PhD (Co-supervisor with Dr. Zhaoling Wang, FEAS), UOIT, Oshawa, January 2012 – July 2016.

*Thesis title:* Analysis of the thermal hydraulics of a multiphase oxygen production reactor in the cu-cl cycle.

*Current position:* Unknown

### III. Masters Students

- M27. Eric Villeneuve, MSc (Sole Supervisor), UOIT, Oshawa, September 2019 –

*Thesis title:* Flow characterization and flow quality improvement in the wind tunnel

- M26. Wahid Besada, MSc (Sole Supervisor), UOIT, Oshawa, September 2019 –

*Thesis title:* Development of a novel cascade heat pump for residential applications

- M25. Chunyu Mao, MSc (Co-Supervisor with Dr. Yuping He, FEAS), UOIT, Oshawa, September 2019 –

*Thesis title:* Development of active control systems for improving safety in high performance vehicles

- M24. Bismark Addo-Binney, MSc (Sole Supervisor), UOIT, Oshawa, September 2018 –

*Thesis title:* Development of a novel cascade heat pump for residential applications

- M23. Raphael Lace, MSc (Sole Supervisor), UOIT, Oshawa, May 2019 –

*Thesis title:* Analysis of aerodynamic devices and vortex identification using OpenFoam

- M22. Branson Chea, MASc (Sole Supervisor), UOIT, Oshawa, May 2019 –.  
*Thesis title:* Numerical characterization of thermal profiles and cooling strategies for the electric car charging system
- M21. Chidiebere Nwaiwu, MSc (Co-supervising with Dr. M.F. Tachie), UofManitoba, Winnipeg, May 2016 – May 2020  
*Thesis title:* Experiment investigation of turbulent jets at a free water interface
- M20. Andre Bolt, MASc (Co-Supervisor with Dr. Ibrahim Dincer, FEAS), UOIT, Oshawa, January 2019 –December 2019.  
*Thesis title:* Development of a novel cascade heat pump for residential applications
- M19. Shaurya Rana, MASc (Sole Supervisor), UOIT, Oshawa, September 2018 –.  
*Thesis title:* Aerodynamic optimization of a model road vehicle underside
- M18. Hayford Azangbebil, MASc (Sole Supervisor), UOIT, Oshawa, September 2018 –.  
*Thesis title:* Analysis of renewable energy techniques for West Africa
- M16. Sam Gustin, MASc (Sole Supervisor), UOIT, Oshawa, September 2017 –.  
*Thesis title:* Active flow control through the use of plasma actuators (PAs).
- M15. Mark Ironside, MASc. (Sole Supervisor), UOIT, Oshawa, September 2016 –  
*Project title:* Calibration and commission of the low speed aerodynamic open circuit wind tunnel
- M14. Seham Shahid, MASc (Sole Supervisor), UOIT, Oshawa, January 2016 –July 2017.  
*Thesis title:* Development and analysis of vortex induced thermal management systems for batteries in electric vehicles.  
*Current position:* Project engineer at Airex Inc., Ontario, Canada
- M17. Abed Omran, MASc (Sole Supervisor), UOIT, Oshawa, September 2017 –2018.  
*Thesis title:* Active flow control using aerodynamic diffuser  
*Current position:* Engineer at Multimatic Inc., Ontario, Canada
- M13. Yuyang Wei, MASc (Sole Supervisor), UOIT, Oshawa, May 2016 –2018.  
*Thesis title:* Development of an air-water hybrid battery management system for electric vehicles. ***Thesis was nominated for Best Thesis Award.***  
*Current position:* Engineer at Multimatic Inc., Ontario, Canada
- M12. Mohammed Ibrahim, MASc (Sole Supervisor), UOIT, Oshawa, Sept. 2016 – October 2018.  
*Thesis title:* Development and analysis of underbody fairing for drag reduction in trucks.  
*Current position:* Engineer at ANSYS Canada, Ontario, Canada

- M11. Raymond Bingham, MSc (Co-Supervisor with Dr. Marc Rosen, FEAS), UOIT, Oshawa, May 2015 –August 2017.  
*Thesis title:* Development of renewable energy and net zero buildings for inland communities.  
*Current position:* Energy engineer at Graphile Engineering Ltd., The Bahamas
- M10. Bashar Alhayek, MSc (Co-Supervisor with Dr. Bale Reddy, FEAS), UOIT, Oshawa, September 2015 –November 2016.  
*Thesis title:* Development and analysis of integrated biomass and solar system for power generation.  
*Current position:* Energy analyst at Nexant Inc., Ontario, Canada
- M9. Abdalla Abdel-Rahman, MSc (Sole Supervisor), UOIT, Oshawa, May 2014 –July 2015.  
*Thesis title:* Development and application of an integrated aerodynamic and thermodynamic testing system for cars.  
***Won 2<sup>nd</sup> place in the 2015 UOIT Three Minutes Thesis (3MT)***  
*Current position:* Engineer at Ford Motor Company, Detroit, USA
- M8. Weijie Shao, MSc (Sole Supervisor), UOIT, Oshawa, September 2013 – August 2014.  
*Thesis title:* Experimental study of turbulent boundary layer flows over forward facing steps with different surface conditions.  
*Current position:* CFD Analyst at CAD-IT Consultants, Shanghai, China
- M7. Rocky Khasow, MSc (Sole Supervisor), UOIT, Oshawa, May 2013 – December 2014.  
*Thesis title:* Aerodynamic and thermal analysis of a heat source at the underside of a passenger vehicle.  
***Received the Best Student Paper Award at SEGE 2014***  
*Current position:* Design Engineer at Skyjack Inc., Ontario, Canada
- M6. Hassan Iftekhhar, MSc (Sole Supervisor), UOIT, Oshawa, January 2015 – May 2016.  
*Thesis title:* Experimental and numerical studies of flows over forward facing steps in pressure gradients.  
*Current position:* Unknown.
- M5. Osama A. Ghani, MSc (Co-supervised with Dr. A. Barari, FEAS), UOIT, Oshawa, September 2011 –May 2013.  
*Thesis title:* Design optimization of aerodynamic drag at the rear of generic passenger cars using NURBS representation.  
*Current position:* Mechanical Engineer at Wenzel Downhole Tools, Edmonton, Canada
- M4. Anagal Ashutosh, MSc (Co-supervisor with Dr. B. Reddy, FEAS), UOIT, Oshawa, September 2012 – June 2014.  
*Thesis title:* Performance analysis of gas turbine cogeneration systems.

*Current position:* New Product Induction Coordinator, UTIL, Canada

M3. Fahad Suleman, MSc (Co-supervisor with Dr. Ibrahim Dincer, FEAS), UOIT, Oshawa, January 2014 – December 2014.

*Thesis title:* Comparative study of various hydrogen production methods for vehicles.

*Current position:* Engineer at Mafna Air Technologies, Ontario, Canada

M2. Forough Foroutan, M.Eng. (Sole Supervisor), UOIT, Oshawa, January 2015 – January 2016.

*Project title:* Mobility improvement and sand reduction techniques for enhanced oil recovery.

*Current position:* Engineer at Cosgroves Ltd Engineering Consultant, New Zealand

M1. Varad Thalnerkar, M.Eng. (Sole Supervisor), UOIT, Oshawa, September 2015 – August 2016.

*Project title:* Aerodynamic improvements in passenger cars.

*Current position:* Engineer at Honda Motor Company, Ontario, Canada

#### **IV. Undergraduate Students**

U24 Olivia Shurtleff, NSERC undergraduate scholar (Summer and Fall 2020)

*Project title:* Soiling mitigation devices for road vehicles.

U23 Michael Lamanna, Summer undergraduate researcher (Summer 2019), UOIT.

*Project title:* Fabrication of full scale Ahmed body for soiling mitigation testing

U22. William Collings, NSERC undergraduate scholar (Summer 2019)

*Project title:* Soiling mitigation devices for road vehicles.

U21. Michael Currie, NSERC undergraduate scholar (Summer 2018)

*Project title:* Active aerodynamic drag reduction devices for road vehicles.

U20. Kirtan Patel, NSERC undergraduate scholar (Summer 2017)

*Project title:* Aerodynamic drag reduction devices for road vehicles.

U19. Mustafa Haji, Summer undergraduate researcher (Summer 2016), UOIT, FEAS, Oshawa.

*Project Title:* Development of active underbody aerodynamic devices for high performance SUVs

U18. Hao Tan, NSERC undergraduate scholar (Summer 2016)

*Project title:* Aerodynamic drag reduction devices for road vehicles.

U17. Aaditya Geed, Summer undergraduate researcher (Summer 2016), UOIT, FEAS, Oshawa.

*Project title:* Aerodynamics of bicycles.

- U16. Radu Giurca, Summer undergraduate researcher (Summer 2016), UOIT, FEAS, Oshawa.  
*Project title:* Aerodynamics of bicycles.
- U15. Ryan Ashley, Summer undergraduate researcher (Summer 2016), UOIT, FEAS, Oshawa.  
*Thesis/Project Title:* Integration of the continuous Cu-Cl thermochemical cycle for Hydrogen production
- U14. Raphael Lace, Canada-Brazil CsF Scholarship Program students summer research internship (Summer 2016).  
*Project title:* Aerodynamic drag reduction devices for road vehicles.
- U13. Felipe Pereira, Canada-Brazil CsF Scholarship Program students summer research internship (Summer 2016).  
*Project title:* Development of a solar water pumping system.
- U12. Selenne Verastegui, General Electric Canada Energy Female in Summer Experience Award (Summer 2016). Co-supervised with Dr. Bale Reddy.  
*Project title:* Analysis of a solar energy cooling system
- U11. Olutope Omole, Undergraduate researcher (Summer 2016/Fall 2016)  
*Project title:* Aerodynamic devices for bicycles
- U10. Ahmad Alnabulsi, Undergraduate researcher (Summer 2016/Fall 2016)  
*Project title:* Radio controlled boats application in modern shipping methods
- U9. Mark Mihailov, Undergraduate summer research (2015)  
*Project title:* Integration of the continuous Cu-Cl thermochemical cycle for Hydrogen production.  
*Current position:* Final year UOIT student
- U8. Victor Mazzuocco, Undergraduate researcher (Summer 2014 to Winter 2016)  
*Project title:* Race car aerodynamics.  
*Current position:* MASc student at the University of Toronto
- U7. Eunsik Bae, NSERC undergraduate scholar (Summer 2015)  
*Project title:* Aerodynamic drag reduction devices for road vehicles.  
*Current position:* Final year UOIT student
- U6. MD Safayaat-UL Alam, NSERC undergraduate scholar (Summer 2014)  
*Project title:* Full scale wind tunnel measurement of a race car.  
*Current position:* Mechanical Engineer at Trench Canada Limited
- U5. Jonas Fernandes, Canada-Brazil CsF Scholarship Program students summer research internship (Summer 2014).

*Project title:* Full scale wind tunnel flow visualization and thermal studies of a race car.

*Current position:* Working as engineer in Brazil

- U4. Iuri F. Viera, Canada-Brazil CsF Scholarship Program students summer research internship (Summer 2014).

*Project title:* Full scale wind tunnel flow visualization and thermal studies of a race car.

*Current position:* Working as engineer in Brazil

- U3. Nicolas P. Quintão, Canada-Brazil CsF Scholarship Program students summer research internship, (Summer 2013).

*Project title:* Aerodynamic and thermal analysis of a heat source at the underside of a passenger vehicle.

*Current position:* Working as an engineer in Brazil

- U2. Adylio V. Neto, Canada-Brazil CsF Scholarship Program students summer research internship, (Summer 2013).

*Project title:* Aerodynamic and thermal analysis of a heat source at the underside of a passenger vehicle.

*Current position:* Unknown

- U1. Diego P. de Andrade, Canada-Brazil CsF Scholarship Program students summer research internship (Summer 2013).

*Project title:* Thermal decomposition process of the copper oxychloride inside the oxygen reactor for the Cu-Cl cycle.

*Current position:* Unknown