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François Tardy, P.Eng. M.Eng. MBA

Education

2017 – 2025 Concordia University (expected) Montreal, QC
Ph.D. (Building Engineering)
Centre for Net-Zero Energy Building Studies

2012 – 2013 HEC Montreal Montreal, QC
MBA (Intensive / English)
HEC 2013 Team Captain at the Ross Energy Case Competition, Michigan

2003 – 2005 École de Technologie Supérieure Montreal, QC
M. Eng. (Mechanical Engineering)
Thesis: A study of the use of heat pipes in thermal storage for cooling.

1997 – 2002 Université de Moncton Moncton, NB
B. App. Sc. (Mechanical Engineering)

Professional experience

2024 – Thermatech / AR Lintern (remote) Detroit, MI
Engineering Project Manager

Development of BTMS (Battery Thermal Management Systems) for use on commercial electric vehicles (trucks, buses, construction vehicles) for clients in North America, Europe and Australia, including:

- *Project management, DFMEA, PPAP activities*
- *Design, Performance analysis, Suppliers, DVP*
- *In-house and external testing*
- *Unit ISO, ANSI and IEC compliance*

2021 – 2024 Lion Electric Saint-Jérome, QC
Project Engineer

- *Responsible for the development of the Lion6, Lion8T trucks for high volume production in Canadian and U.S. plants. Design and testing of AC, pneumatic, cooling, and battery thermal management systems.*

Adjunct Professor

2015 – Concordia University Montreal, QC

- *Engineering Management*
- *Machine Design and Drawing*
- *Engineering Economics*
- *Theory of Machines*
- *Project Management*
- *Project Cost Estimating*
- *Thermodynamics*
- *Mechanical Engineering Drawings*
- *HVAC Design*
- *Computer-Aided Mechanical Design*

2021 – 2023 Jilin Institute of Chemical Technology Jilin City, China

- *Statics*
- *Machine Design*

2014 –2015 École de Technologie Supérieure Montreal, QC

- *Virtual Product Development*
- *Thermodynamics*

2013– 2014 Vanier College Montreal, QC

- *Electrical & Lighting Systems*
- *Principles of Electric Controls*

2013 – 2020 Self-employment Montreal, QC

Energy Consultant

- *Authored over 160 extensive energy audits in energy intensive buildings, including supermarkets, office towers, production facilities, and more.*
- *Obtained over 3 M$ in subsidies from commercial programs available from Hydro-Québec, Énergir, NBPöwer, TEQ, and others.*

2008 – 2012 PCO Innovation (Accenture) Montreal, QC / Lyon, France

Senior Consultant

- *(2012) **IBM / Bombardier Aerospace.** CATIA V5 / ENOVIA coordination for a global data migration project at involving outsourced suppliers.*
- *(2011) **Volvo Powertrain Finance**. Deployment of customized SAP system for production sites around the world. Global super user status. Based in Lyon, France.*
- *(2009) **Volvo IT**. Design and CATIA/ENOVIA training for suppliers in Spain.*
- *(2008) **Volvo 3P**. Managed engine prototype testing activities in Lyon, France.*

2010 – 2011 EH2solar Blainville, QC

Director of Engineering

- *Managed the design, development and submittal for various cogeneration and desalination project proposals for California. Interacted with various government agencies and power plant owners.*
- *Responsible for efficiency and feasibility studies regarding submitted projects, SR&ED tax credit claims and patent applications.*

2008 Carrier / United Technologies Laval, QC

Refrigeration Engineer

- *Chief engineer of refrigeration for the One World Trade Center (NYC) HVAC submittal project, one of the largest development projects in the company.*
- *Created one of the most innovative product simulation programs in the company and managed refrigeration activities on a full-scale experimental setup.*
- *Managed the facility customer service department and provided engineering expertise on many projects throughout the company.*

2006 – 2007 École Polytechnique de Montreal Montreal, QC

Research Assistant

Thermohydraulic design of a Ventricular assist device and study of its effects on blood flow. Expertise developed in Meshing, Gas Dynamics, Heat Transfer and Turbulence.

2005 – 2006 Bombardier Aerospace Montreal, QC

Aerospace Engineer

Completed 1-year New Graduate Training Program, focusing on flight systems, avionics, stress, design, pneumatics, experimental, flight testing, and more, resolved a number of pneumatics and icing problems in CRJ and Challenger aircraft.

2000 – 2001 Public Works & Gov. Services Canada Halifax, NS

Student Mechanical Engineer

Design and implementation of HVAC systems for federal buildings, research on alternative refrigerants, cost estimating and system redesign.

Professional	• Member: **Ordre des ingénieurs du Québec** (128700) • Member: **ASHRAE**
Languages	**Canadian** citizen. Trilingual; strong abilities in French and English, both written and oral. Advanced level in Spanish. Experience in translation for large organizations.
CAD Tools	• ArcGIS ArcMAP • Femlab 3.0 / Comsol Multiphysics • eQuest / eQRefrig • CATIA V5 / Enovia LCA • Autodesk REVIT / CFD
Published Papers	Tardy, F. (2025) Methodology for estimating building thermal resistance and heat capacity values in-situ using exterior measurements and meteorological data, Journal of Building Engineering 101. Tardy, F. (2023) A review of the use of infrared thermography in building envelope thermal property characterization studies, Journal of Building Engineering 75. Tardy, F., Lee, B. (2019) Building related energy poverty in developed countries – Past, present, and future from a Canadian perspective. Energy and Buildings 194, pp. 46-61. Hosseini, M., Tardy, F., Lee, B. (2018) Cooling and heating energy performance of a building with a variety of roof designs; the effects of future weather data in a cold climate. Journal of Building Engineering 17, pp. 107-114. Sami, S., Tardy, F. (2015) Numerical Prediction of Thermal Storage Using Phase Change Material. Journal of Technology Innovations in Renewable Energy. 4. 80-90. Tardy, F., Sami, S. (2009) Thermal analysis of heat pipes during thermal storage. Applied Thermal Engineering. 29. 329–333. Tardy, F., Sami, S. (2008) An experimental study determining behaviour of heat pipes in thermal storage. International Journal of Ambient Energy. 29. 162-168. Tardy, F., Sami, S. (2005) A Study of the Use of Heat Pipes in Thermal Storage for Cooling. Proceedings of the ASME Process Industries Division, PID, 2006, pp. 89-93.
Conferences	Comprendre l'énergie dans le contexte économique d'aujourd'hui • Club ÉnergieÉTS, Montreal (Canada), May 12th, 2016. • Conférence Internationale des Formations d'Ingénieurs et de Techniciens d'Expression Française, Montreal (Canada), August 24th, 2016. Filling the Industry Leadership Gap in Sustainability • Business Beyond Tomorrow, Montreal (Canada), March 18th, 2017. Les réalités économiques des énergies renouvelables • École Nationale d'Agriculture, Meknès, Morocco, May 11th, 2017. • Université Cadi Ayyad, Marrakesh, Morocco, May 22nd, 2017.
Media	C'est quoi la pauvreté énergétique et comment on devrait s'y attaquer? *Moteur de recherche*, Radio-Canada Première, October 22nd, 2019. Thermal imaging of housing stock can tell us where energy costs will hurt, Concordia researchers show. Concordia University News, October 1st, 2019.
Reviewer	**Article Reviewer**: • *Energy Policy* • *Energy and Buildings* • *Journal of Building Engineering* **Research Grant Proposal Reviewer** • *Mitacs Accelerate* • *Killam Laureates*
Other	**Member**: Golden Key International Honour Society, Concordia University Chapter. **Cardholder**: ASP Construction Safety (Quebec).