

CURRICULUM VITAE

a) NAME

Foruzanmehr, M.Reza, Assistant professor, tenure-track
Member of the Faculty of Graduate and Postdoctoral Studies: yes

b) DEGREES:

Ph.D., Civil Engineering, University of Sherbrooke, Canada, 2016
M.Sc., Biomaterials Engineering, Iran University of Science and Technology, Iran, 2008
B.S., Materials Science and Engineering, Iran University of Science and Technology, Iran, 2005

c) EMPLOYMENT HISTORY:

2018- Assistant professor at the department of civil engineering, uOttawa.
2016–2018 Academic Coordinator at Carrefour of Innovative Technologies in Ecodesign in Sherbrooke
2014–2017 Part-time lecturer at Sherbrooke University
2013–2016 Researcher at Centre de Technologie Minéral et de Plasturgie in Thetford Mines
2010–2011 Research professional at Petrochemical Complex in Iran

d) ACADEMIC HONOURS:

BMP Industrial Innovation Scholarship for advanced Doctoral studies by FRQNT, and NSERC (2013)
Best Overall GPA among all Biomaterials engineering master students in the School of Materials Science and Engineering of IRAN University of Science and Technology 2008
Scholarship rewarding academic excellence (School of Engineering, University of Sherbrooke) (2015)

e) SCHOLARLY AND PROFESSIONAL ACADEMIC ACTIVITIES:

2017-Present Professional Engineer in the Province of Ontario EIT.
PEO#100511199
2018-present Member of American Society for Testing and Materials (ASTM), Committee D13.17
Bast Fibers and Plants
2013-Present Member of CREPEC (Research Center for High Performance Polymer and Composite Systems)
2012-Present Canadian society of biomaterials

f) GRADUATE SUPERVISIONS:

University of Ottawa (since Jan 2018)

In progress: 3 MASc

Mathieu Lemaire-Paul (MASc), (The effect of sol-gel treatment on the physical and mechanical properties of spruce wood) Supervisor: Sept 2019

Amir Davoodi (MASc), (*Timber hydrophobization by obstructing the vascular structure and reducing the wettability using Sol-Gel technique*) co-supervisor, start date: May 2018

Ineku Amhayesus Metaferia (MASc), (*The Characterization of viscoelastic properties of steel corrosion products*) co-supervisor, start date: Oct 2018

Université de Sherbrooke (since Jan 2018)

Completed: 4 PhD, 1 Master

Lina Boulos (PhD), (*The effect of Zirconium dioxide on the physical and mechanical properties of flax fibers*), Co-supervisor.

Babak Fathi (PhD), (*The effect of cellulose oxidation on grafting efficiency of silane on flax fibers*).

Clement Richard (MASc), (*Caractérisation chimique des fibres d'asclépiade et l'effet de différents traitements sur son comportement*), Co-supervisor.

Marie Bayart (PhD), (*The effect of TiO₂ grafting on short flax fibers for injection molding of polylactic acid reinforced composites*), Co-supervisor.

Pierre ovlaque (PhD), (*Injection molding of polylactic acid reinforced with milkweed floss fibers*), Co-supervisor.

g) GRADUATE COURSES:

2016-2017 Dégradation des matériaux

2018-2019 Characterization methods for materials

h) EXTERNAL RESEARCH FUNDING:

| <u>Year</u> | <u>Source</u> | <u>Type*</u> | <u>Amount per year</u> | <u>Purpose**</u> | <u>Title of Project</u> |
|-------------|------------------------------|--------------|------------------------|--------------------|---|
| 2018-2023 | NSERC – Discovery Grant | C | \$26,000 | Research PI (100%) | Development of sustainable building materials using Canadian bio-mass |
| 2018-2023 | Discovery Launch Supplements | C | \$12,500 | Research PI (100%) | Development of sustainable building materials using Canadian bio-mass |
| 2019 | WUSRS | | \$4000 | Research PI (100%) | Honeycomb-reinforced concrete |
| 2019 | WUSRS | | \$4000 | Research PI (100%) | Milkweed Fibers & Cement Paste Shrinkage |

i) INTERNAL RESEARCH FUNDING:

Upon my appointment to the tenure-track position in January 2018, I was granted start-up funds in the amount of \$30,000 (\$20,000 from the Faculty of Engineering and \$10,000 from the Department).

Supplemental start-up funds for purchasing lab equipment (\$ 100,000)

j) PUBLICATIONS:

1) Life-time summary according to the following categories:

- Refereed Chapters in books 1
- Papers in refereed journal 15
- Papers in refereed conference proceedings.....8

Refereed Chapters in Books:

1. **Foruzanmehr, M.** Stevanovic, T. Robert, M. (2017). Chapter: Milkweed Floss Fibers – Characterization and Potential Industrial Applications. Taylor & Francis Group

Papers in refereed Journals:

1. Richard, C., **Foruzanmehr, M.** et al. Characterization of components of milkweed floss fiber, Separation Science and Technology (Philadelphia) Article in press 2018.
2. Ovlaque, P., **Foruzanmehr, M.** et al. Milkweed floss fiber/PLA composites: effect of alkaline and epoxy-silanol surface modifications on their mechanical properties Composite Interfaces DOI:10.1080/09276440.2019.1655316
3. Boulos, L., **Foruzanmehr, M.** et al. The effect of a zirconium dioxide sol-gel treatment on the durability of flax reinforcements in cementitious composites. Cement and Concrete Research. DOI: 10.1016/j.cemconres.2018.10.004 115, pp. 105-115,2019
4. Fathi, B., **Foruzanmehr, M.** et al., Novel approach for silane treatment of flax fiber to improve the interfacial adhesion in flax/bio epoxy composites. Journal of Composite Materials. Article in Press 2019
5. Boulos, L., **Foruzanmehr, M.** et al., Evolution of the interfacial transition zone and the degradation mechanism of zirconia treated flax fabric reinforced cementitious composites. Construction and Building Materials. pp. 120-130,2019
6. Boulos, L., **Foruzanmehr, M.** et al., Wetting Analysis and Surface Characterization of Flax Fibers Modified with Zirconia by Sol-Gel Method. Journal of surface and Coatings Technology. DOI: 10.1016/j.surfcoat. 313, pp. 407-416, 2017
7. Bayart, M., **Foruzanmehr, M.** et al., Mechanical and Durability Characterization of Nano-reinforced Flax Fibers/PLA composites. Journal of fiber and polymers. DOI: 10.1007/s12221-017-7123-x 18(7), pp. 1288-1295 2017.
8. Fathi, B., **Foruzanmehr, M.** et al., The Effect of TEMPO oxidation of flax fibers on the grafting efficiency of Silane coupling. Journal of material science. 52(17), pp.10624-10636, 2017.
9. **Foruzanmehr, M.** et al., The Effect of Cellulose Oxidation on Interfacial Bonding of Nano-TiO₂ Thin Film to Flax Fibers. Journal of Cellulose. DOI: 10.1007/s10570-016-1185-6 24(3), pp. 1529-1542, 2016
10. **Foruzanmehr, M.** et al. Physical and Mechanical Properties of PLA Composites Reinforced by TiO₂ Grafted Flax Fibers. Journal of Materials and Design. DOI: 10.1016/j.matdes. 106, pp. 295-304, 2016.
11. **Foruzanmehr, M.** et al., Degradation Characteristics of New Bio-Resin Based- FRP for External Rehabilitation of Structures. Journal of Composite Materials. DOI: 10.1177/0021998315590262. 50(9), pp. 1227-1239, 2016
12. **Foruzanmehr, M.**, Benmokrane, B. et al., Laboratory Evaluation of Chemical Resistance of Pultruded GFRP Dowels for Concrete Pavement. Journal of Materials and Structure. DOI: 10.1617/s11527-015-0549-y, 49(3), pp. 929-940, 2016
13. Beauvais, S., **Foruzanmehr, M.** et al., Interactions between bone cells and biomaterial: An Update. Journal of Frontiers in Bioscience. DOI: 10.2741/S460 8(2), pp. 227-263, 2016
14. **Foruzanmehr, M.** et al., The Effect of Grafting a Nano-TiO₂ Thin Film on physical and mechanical properties of Cellulosic Natural Fiber. Journal of Materials and Design. DOI: 10.1016/j.matdes. 85, pp. 671-678, 2015
15. **Foruzanmehr, M.** et al., Nano-structure TiO₂ film coating on 316L stainless steel via Sol-Gel technique for blood compatibility improvement. Nanomedicine Journal. DOI: 10.7508/nmj.2014.03.002, pp.1, 2014.

Papers in refereed conference proceedings

1. **Foruzanmehr, M.** et al., Interfacial characterization of a functionalized cellulosic fiber reinforced PLA composites In Proceedings of conference: International SAMPE Technical Conference, Long beach, USA. 2016.
2. **Foruzanmehr, M.** et al., In vitro degradation behavior of functionalized cellulosic fibers reinforced PLA composite. Frontier in Bioengineering and Biotechnology. Annual congress of biomaterials, Montreal DOI: 10.3389/conf.FBIOE. 2016
3. **Foruzanmehr, M.** et al., Physical and mechanical behavior of TiO₂ thin film grafted flax reinforcements. In Proceedings of conference: CAMX 2015- Composites and Advanced Materials Expo, Dallas, USA. 2015.
4. **Foruzanmehr, M.** et al., Interfacial characterization of epoxy-resin reinforced with TiO₂coated flax fibers composites. In Proceedings of conference: International SAMPE Technical Conference, Baltimore, USA. 2015.
5. Boulos, L., **Foruzanmehr, M.** et al., Coating of flax fibers: A comparison of zirconates and silanes treatments. In Proceeding of conference: International SAMPE Technical Conference, Baltimore, USA. 2015.
6. Boulos, L., **Foruzanmehr, M.** et al., Effect of zirconates and silanes treatments on the physical and mechanical properties of flax fibers for applications in cementitious composites. In Proceeding of conference: 1st International conference of Bio-based Building Materials (ICBBM), Clermont-Ferrand, France. 2015.
7. **Foruzanmehr, M.**, et al., Characterization of epoxy-resin reinforced with TiO₂ modified flax fibers composites. In Proceeding of conference: CAMX 2014- Composites and Advanced Materials Expo: Combined Strength. Unsurpassed Innovation, Orlando, USA. 2015.
8. **Foruzanmehr, M.**, et al., Investigation of TiO₂ Nano Structural film Coating enhancement on S.S 316L and Blood compatibility characterization. In Proceeding of conference: International Conference on Nanotechnology: Fundamentals and Applications, Ottawa, Canada. 2015