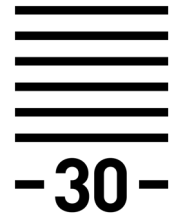




**Olivia Yalnizyan, M.A.Sc., B.A.Sc.** *(she/her)*

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## EXPERT SUMMARY

Ms. Olivia Yalnizyan is an Associate with the Materials Failure Group at 30 Forensic Engineering. She holds a Masters in Material Science & Engineering from the University of Toronto, where she specialized in investigations of orthopedic implant failures and biomaterials. At 30 Forensic Engineering, Olivia investigates a diverse range of product failures, mechanical system failures, and equipment failures.

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## SPECIALIZED PROFESSIONAL COMPETENCIES

- Engineering Design and Product Failure
- Material Characterization and Chemical Analysis
- Microscopy & Fractographic Analysis
- Metallurgical Analysis of Material Microstructures & Mechanical Properties
- Material Production and Manufacturing Processes
- Biomaterials & Biomedical Devices
- Scope Development & Project Management
- Technical Writing

## ACADEMIC BACKGROUND

M.A.Sc., University of Toronto, Toronto, Ontario, 2018

B.A.Sc., University of Toronto, Toronto, Ontario, 2016

## PROFESSIONAL EXPERIENCE

### **30 Forensic Engineering**

Associate, Materials Failure Group  
2019 – Present, Toronto, Ontario

- Product liability investigations (property losses and personal injuries).
- Mechanical failure and material analysis (e.g. fatigue, corrosion, overload, stress failures)



- Piping and Plumbing Investigations (e.g. corrosion, soldering, over pressurization, degradation)
- Analysis of Joint Failures (e.g. welded, brazed, soldered, clamped, threaded)
- Plastic and Polymer Failures (e.g. degradation, stress failures, manufacturing defects)
- Equipment and Appliance Failures (e.g. fan coil units, water heaters, dishwashers, pumps)
- HVAC and Sprinkler System Failures (e.g. riser pipes, fittings, valves, sprinkler heads and pumps)
- Glass Failures (e.g. spontaneous fractures, tempered and safety glass, origin assessment of scratches)
- Coating and Sealant Failures (e.g. delamination, degradation, unintended chemical reactions)
- Investigation of Seating Stability (e.g. chairs, stools, lawn furniture, swings)
- Automatic and Manual Door, Garage and Overhead Gate Assessments (e.g. door speeds, sensor activity)
- Sports equipment and exercise materials (e.g. bicycles, home gyms, floor mats)

### **University of Toronto**

Teaching Assistant, MSE431/1031: Forensic Engineering  
2016 – 2018, Toronto, Ontario

- Explained the fundamentals of various forensic investigation processes.
- Demonstrated the use of Failure Analysis tools.
- Advised on and reviewed all failure analysis reports from case studies.

### **Agfa Graphics**

Researcher  
2014 – 2015, Antwerp, Belgium

- Engineered polymer coatings in exploration of crosslinking capabilities of nanocapsule solutions.
- Investigated coating properties with the use of SEM, FTIR, and TOF-SIMS techniques.

### **Self Employed**

Contractor  
2010 – 2014, Toronto, Ontario

- Completed a range of construction, renovation, and repair projects for both residential and commercial properties.
- Managed and coordinated all job estimates, project tasks, and equipment use on site.
- Developed proficient hands-on skills in carpentry, electrical, plumbing, welding, masonry, and a practical knowledge of a vast range of tools and machinery.