



Jean-Loup Curtat MASc EIT

Junior Engineer

contact

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☎ 778.732.0650

📍 Vancouver

expertise

Collision Reconstruction

Mr. Jean-Loup Curtat is an engineer in training and a member of the firm's Collision Reconstruction group in Vancouver. Working with the firm's senior engineers, Jean-Loup has learned how to use engineering principles to document and interpret crash evidence. Reconstructing accidents can be a challenge, involving many factors and types of evidence. Jean-Loup brings an expertise in mechanical engineering and an innate curiosity to his work at MEA Forensic. "I've always been curious. Mechanical engineering provided me with the key to understanding a lot of different elements," Jean-Loup says.

Jean-Loup holds a Bachelor's and Master's degree in Mechanical Engineering from École de Technologie Supérieure (ÉTS) in Montréal. His thesis project focused on investigating methods for repairing large hydro-electric turbine blades. Specifically, Jean-Loup studied a method for improving the fatigue life of the blades by hammer peening. Metal fatigue is a specialized branch of materials science, but there is a connection to the field of accident reconstruction. When a part of a vehicle fails, a background in metal fatigue comes in handy.

Jean-Loup looks forward to being involved in MEA's numerous research projects. "Research teaches you to ask the correct questions," he observes. As an avid mountain biker and veteran of the North Shore's notoriously difficult trails, he is especially interested in the firm's research on bicycles and the Injury Biomechanics group's latest findings on helmet safety.

education

Masters of Applied Science, Mechanical Engineering, École de technologie supérieure (ÉTS), Montréal, QC, 2016

Bachelor of Engineering, Mechanical Engineering, École de technologie supérieure (ÉTS), Montréal, QC, 2013

professional status

Engineer in Training, Engineers and Geoscientists British-Columbia, 2018

professional experience

MEA Forensic Engineers & Scientists

Engineer in Training, April 2018 to present

Conducts technical investigations involving motor vehicle accidents including the determination of collision severity, collision sequence, occupant dynamics, seat belt use and effectiveness, and vehicle speed.

Mountain Equipment Co-Op, Vancouver, BC

Merchandise Assistant/Floor Supervisor, 2016 to 2018

Responsibilities included: maintaining data in the Merchandise Management System; communicating with vendors and buyers to ensure data accuracy in new products and orders; participating in process improvement and development of lean working methods – Managing social media engagement and staffing resources to ensure the call center performance targets and customer service levels were met.

Hydro-Québec's Research Institute (IREQ), Varennes, QC

Research Student, 2014 to 2016

Investigated the effect of hammer peening on fatigue life of an E309L stainless steel weld as well as developed a test procedure and designed a fatigue specimen capable of producing consistent results. Performed: sample design, fatigue testing, strain measurements, heat treatments, failure analysis, metallurgic observation and project management.

CVT Corp, Ste-Julie, QC

Component Design Intern, 2012

Designed and built a test bench to measure power losses in a CVT. This equipment consisted in an assembly of electrical motors, torque measuring devices, power transmission elements and replicas of CVT components.

National Research Council IMI (NRC), Boucherville, QC

Material Research Intern, 2011

Characterized the mechanical properties of composites used in ballistic defense. Designed a testing protocol to measure mechanical properties of aramid fiber laminates and developed innovative bladder molding techniques.

Ancor Flexibles Capsules Canada Inc., St-Cesaire, QC

Quality Management Intern, 2010

Co-wrote the ISO 9001 quality management document. The certification was awarded shortly after my work was completed. Interacted with workers at every level of production, sales and engineering to understand and document the processes used for manufacturing and client interaction.

publications

Accuracy of speed change measured by event data recorders during oblique offset frontal impacts

Influence of hammer peening on fatigue life of E309L steel used for 13%Cr-4%Ni blade runner repairs

training and professional development

August 2019 – PC Crash 12.0, MEA Forensic, Seattle, WA.

April 2019 – Crash Data Specialists LLC Crash Data Retrieval (CDR) Operators, Analysis & Application Course, Bedford, NH.

June 2018 – PC Crash 11.1, MEA Forensic, Toronto, ON.

April – June 2018 – Essentials, Expert and Theory PC Crash training modules, MEA Forensic, Vancouver, BC.

June 2017 – 2-day Mountain Equipment Coop course on staff training, MEC, Vancouver, BC.

2014-2016 Monthly multi-topic conferences from field experts within Hydro-Québec's Research Centre, Varennes, Qc.
