

Live

**FibreCITY Initiative at the Composites Innovation Centre:
An Overview and Links to the Biomaterials Industry**

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Abstract: The concept of the Prairie Agricultural Fibre Characterization Industrial Technology Capability (FibreCITY) initiative at the Composites Innovation Centre (CIC) began in 2011. Through funding from various sources (Western Economic Diversification, Agriculture and Agri-Food Canada, and Manitoba Agriculture Food and Rural Development) FibreCITY has grown to a facility occupying two locations that houses a pilot-scale agricultural straw decortication line and a state-of-the-art laboratory for physical, mechanical and chemical characterization of natural fibres for biomaterial applications including composites. The objective of FibreCITY at CIC is to be a centre of excellence for agricultural crop grading and a driving force behind the bioproducts industry. This presentation will outline highlights of the developments of FibreCITY including fibre characterization/grading capabilities developed, databases being constructed for algorithms to predict the performance of biofibres in composite materials, activities related to developing new standards for testing of natural fibres, and examples of projects with partners along the industrial bioproducts supply chain.

Biography: Shawna DuCharme is Principal Engineer for the Product Innovation team at the Composites Innovation Centre (CIC) in Winnipeg, Canada. She obtained a Bachelor of Science Degree in Mechanical Engineering, Aerospace, from the University of Manitoba. Her previous experience working in the aerospace industry has included various roles encompassing design, mechanical and thermal analysis, materials and process engineering, and project management related to the use of composite materials in both aircraft and spacecraft structures. In 2015, she transitioned to her present position at the CIC and shifted her career focus to technology development for bio-based composites and natural fibres. She is currently responsible for oversight of a portfolio of CIC projects aimed at developing and commercializing applications of biomaterials, and through this role, provides support to industry clients across various sectors including transportation, building products, and consumer goods.



When: Monday, December 12, 2016 at 10 am – 12 noon
Where: EP#252