**Robenson Cherizol, Eng. ; PhD.**

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**Highlights of Qualifications**

* Experienced Technical Leader; Product, Project and Program Manager
* Strong Expertise in Additive Manufacturing, Compounding & Extrusion Processes, Injection and compression molding and Adhesives
* Failure Analysis Engineering and Reliability testing on Complex Materials
* Rheological characteristics and viscoelastic behavior of composite materials
* Materials processing, flow properties and characterizations
* Experienced with testing of polymer composite, Tensile testing, Impact testing and Flexural Testing
* Experienced in Thermal & Thermomechanical Characterizations of polymers and Composites Experience in determining the thermal conductivities (commodity)
* Skilled in Time management, Scheduling and Priorities Set up
* EPA/OBD Requirements and Emission Testing, Three-way Catalysts (TWC)
* Internal combustion and engine calibration
* Strong analytical, organizational and problem-solving skills
* Ability to accomplish numerous tasks and guaranteed delivery of highest quality outcomes in challenging, time-sensitive environments
* Languages: English, Spanish and French

**Technical Skills**

* 3D Printing, Rheology, Extrusion process, Infusion, Compression and Lamination, Injection and Compression molding
* SEM, TEM, DSC, FTIR, XPS, XRD, TGA, DMA, Instron, TPR-H2, TPO,
* DOORS, RTC, SAP, Visio, GRANTA, Project and Program Management, NTI and NPI, time sheet
* SPC, six sigma tools, DFMEA, Lean Six Sigma, Design for Six Sigma
* AutoCAD, Solidworks, Simplify3D,
* Minitab, Data Mining. MS Office, Modeling
* FDE, OHSA18001, ISO9001, ISO9000, QS900, ISO14001, TS16949
* Powertrain & Engine Management tools; Engine Calibration & and Emissions Testing
* Catalysts & OBD, EPA & CARB; GD&T

**Work Experience**

**Materials Technical Leader January 2019 to Present**

@ General Electric, New Orleans, LA

* Developed the vision, set strategic priorities, and review technical feasibility for key additive programs
* Ensured alignment between manufacturing and product line strategy for renewable energy product lines
* Developed expertise in Polymer Composites Processing & Characterization
* For Polymers programs, be accountable for the technical program success
* Worked various sites to help identify high ROI applications, help in design and prove out of the application
* Supported the local teams to deploy the additive process into production
* Supported the effort to create standard and nonstandard manufacturing Equipment / User Requirement Specifications to further drive additive deployment and standardization across renewable energy
* Be a part of our New Product Introduction process to influence designs to incorporate design for additive standards so low cost / shorter lead time solutions are part of initial production release
* Stayed connected with industry and university trends, helping GE Renewable Energy stay current with new large format metal printing processes innovations

**Materials Researcher Fellow May 2018 to Nov 2018**

@ University of Windsor

* Investigated noble carbon-based composites and hybrid materials for future Electric motors
* Developed alternative magnet Materials for ACIM and PMSM
* Performed research on the processability of Carbon nanotubes and/or/ graphene for their utilization electrical wiring system for future high-performance electrical vehicles

**Materials Scientist Engineer**

Eaton Corporation, Southfield MI **Oct. 2017 to March 2018**

* Developed expertise in Polymer Composites Processing & Characterization
* Developed and Investigate Extrusion Processes, Injection and Compression molding
* Additive Manufacturing (3D Printing) manufacturing technologies of materials for aerospace, medical and Automotive applications
* Investigated new Coatings and adhesives materials and processes
* Investigated the thermal and electrical conductivities (commodity) of polymers and metals
* Realize the DOE and DFMEA for different processes and formulations
* Performed the complete mechanical, commodity characterizations of different series of materials
* Developed expertise for the Thermal & Viscoelastic Analyses of the fibre reinforced polymer composites via DMA, TGA, Rheometer, DSC, FTIR, Etc.
* Investigated the flow properties of Fibre Reinforced Polymer Composites and their impact on the structural material components
* Supported the Engineering and Manufacturing teams in new products developments

**Performance Engineer Aug. 2016 – 2017**

*General Motors, Michigan*

* OBD Diagnostic Strategist – Designs and Develops Component Diagnostics
* Developed component diagnostic based on GM OBD Bill of Design
* Used Electrical RTC process to write and release diagnostic requirements
* Worked with software team to ensure software code was correct
* Led the component diagnostic DFMEA / AFMEA
* Wrote calibration guide for each diagnostic
* Wrote CertDoc and diagnostic description for each diagnostic
* Reviewed test plans and data
* Worked with Calibrators to resolve diagnostic issues

**Research & Development Engineer May 2011 – 2014**

*Ford Motor Company, Windsor*

* Conducted research, development, and manufacturing lightweight materials from recycled carbon fiber and green fiber reinforced polymer composites for vehicles manufacturing
* Set-up material and chemical labs, prepared test results and publish the reports
* Developed lightweight composite materials from polymer via different processes
* Supported Ford Motors Company in the bill of materials and processes
* Supported the engineering design and development of new automotive interiors and engine materials
* Provided expertise in the selection of materials and processes during development
* Worked with suppliers to provide update and expertise in materials and processes
* Represented Ford in high level technical conference in materials
* Analyzed the DFMEA and PFMEA for different materials and processes
* Worked in emissions testing for different engine testing conditions, Controlled and minimized NOx and CO
* Provided support to the project engineering team for rotating and stationary equipment specification
* Conducted engine mapping and calibration tests to achieve desired torque and power performance
* Cooperating dynamometer cells through calibration software packages, such as ETAS INCA and ATI Vision to control engine parameters and performance
* Performed the initial setup of tests, data collection, and reporting
* Modelling process conditions and parameters for physical problems

**Process Control Manager Jul 2006 to Aug 2008**

*Coca-Cola Bottling Company,**Haiti*

* Manage the operations and process unitary (OPU)
* Control production quality and methods of manufacture of different varieties of products
* Supervise the processes and procedures of manufacture of various products of Coca-Cola
* Supervise the laboratories of quality
* Managing water treatment (Portable, steam and water lasts)
* Study and make innovations to reduce production costs while improving quality
* Respond to several complaints of Coca-Cola and customers on product quality
* Supervise and plan the sanitation and CIP tanks, the system of reverse osmosis, production lines
* Manage inventory and raw materials for the manufacture of finished products
* Manage the receipt, inventory and the use of CO2 and caustic soda
* Supervise staff attached to the quality control department

**Process Controller (University Summer Internship) 2002 – 2006**

*Diaz Petroleum Refinery, Santiago*

* Worked in hydrodesulphurization of Naphtha
* Participated in the catalytic reformation of naphtha

**Education**

**PhD in Chemical Engineering** University of Toronto, Canada **2016**

**Master Degree in Chemical Engineering** Laval University, Québec **2011**

**Publications and Patents**

* One-pot solvothermal synthesis of mixed Cu-Ce-Ox nanocatalysts and their catalytic activity for low temperature CO oxidation. Applied Catalysis A: General 447, 60-66
* Cherizol, R., Sain, M. and Tjong, J. (2017) Effect of Lithium Chloride on the Fibre Length Distribution, Processing Temperature and the **Rheological Properties** of High-Yield-Pulp-Fibre-Reinforced Modified Bio-Based **Polyamide 11 Composite**. doi:10.4236/anp.2017.62005
* Cherizol, R. , Sain, M. and Tjong, J. (2015) Evaluation of the Influence of Fibre Aspect Ratio and Fibre Content on the **Rheological Characteristic** of High Yield Pulp Fibre Reinforced **Polyamide** 11 “HYP/PA11” Green Composite.Open Journal of Polymer Chemistry, 5, 1-8. doi: 10.4236/ojpchem.2015.51001.
* Cherizol, R. , Sain, M. and Tjong, J. (2015) Review of Non-Newtonian Mathematical Models for Rheological Characteristics of **Viscoelastic Composites.** Green and Sustainable Chemistry, 5, 6-14. doi:10.4236/gsc.2015.51002.
* Cherizol, R., Sain, M. and Tjong, J. (2015) Modeling the Rheological Characteristics of Flexible High-Yield Pulp-Fibre-Reinforced Bio-Based Nylon 11 Bio-Composite. Journal of Encapsulation and Adsorption Sciences, 5, 1-10. doi: 10.4236/jeas.2015.51001
* Modeling the Interfacial shear stress in function of fiber aspect ratio of high yield pulp fiber reinforced bio-based nylon 11 composite. Cherizol, R., Sain, M. and Tjong, J.
* Filled 4 Patents, 2 patents ready to fill and 1 IDL combined (total 7 patents) on: Materials Development, Repair techniques for Additive Manufacturing parts and Thermoplastics, Defects in 3D printing, Relationship between Interlayer temperature and Interlayer Strengths of 3D printed components; Methods to improve the interlayer Strength of 3D printing Components.

**Scholarships and Awards**

* Grant holder of FQRNT (excellent academic record and professional experiences); Sept 2008 – Aug 2010
* Winner of National Exact Science for Haiti; Aug 2000