

Serge CHEMALY

Senior Mechanical Engineer

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Nationality: Lebanese-German

36 years old, Married



PROFILE

Adaptable and innovative qualified mechanical engineer with 10 years' experience, creating automotive product and cost-efficient designs.

- Solid expertise in 3D design, new content development, simulation, and validation.
- Broad knowledge in plastic material and in automotive product (i.e. Switches, Sensors and Power product)
- Superior problem-solving and time-management abilities; adept at identifying the root cause of issues and implementing creative, targeted solutions.
- Team spirited with effective communication and presentation skills, able to coordinate with management, vendors, and staff to achieve goals.

I'm looking to develop my experience in an organization with leading edge technologies, where I can pursue my professional mechanical engineering career at a respectable organization which would allow me to prove my working knowledge and to advance in the professional field.

TECHNICAL PROFICIENCIES

Software: ProE, Creo, Catia, SolidWorks, PLM, Moldflow, Ansys, TopSolid, AutoCAD & MS office.

Engineering Skills: Geometric dimensioning and tolerancing, 3D design, Finite element analysis, Design Failure Mode and Effects Analysis, Strength of materials.

Languages: Bilingual French-Arabic, English (good level: oral, written)

PROFESSIONAL EXPERIENCE

Senior Mechanical Design Engineer of Power Product

Methode Electronics SAL - Beirut Lebanon

2018-Present

- Design of Main Frames, E-boxes & Junction box which include copper bus bars over-molded with plastic (i.e. PBT GF30-FL). Run simulations FEA and MoldFlow, Tolerance stackup study for design Validation to meet the specification. Product validation through prototype parts. Provide 2D drawings, 3D Models & DFMEA. Contact with suppliers and customers. These products are made for electrical cars, we have a High voltage & Current, harsh environment, Vibration and temperature must be considered during development phase.
- **Bus Bar:** In charge of developing a new generation of bus bars and heat sink which are integrated In an inverter, Medical Scanner and BDU. FEA, Tolerance stack up and Vibration testing. Drawings, DFMEA & Moldflow simulation
The application is Electrical cars and Medical.

Team Leader & Mechanical Design Engineer of Sensors Product

Methode Electronics SAL - Beirut Lebanon

2015-2018

- Responsible of the Sensor Team, manage each project to meet deadlines and specs required. Support each engineer when needed to complete their tasks.
- Design of Torque & Speed Sensors: In charge of mechanical design, provide 3D model, drawings, FEA simulation, tolerance stackup and DFMEA. Assist the electronic engineer by designing the outline of the bare board to define the area for the components. Support the manufacture engineer and testing laboratory. Contact with suppliers and customers to meet the specifications required. The Torque sensor technology is MagnetoElastic and the Speed sensor is Hall Effect. The application of these product are Electrical bike, ATV-steering wheel and automotive.

Mechanical Design Engineer

Methode Electronics SAL - Beirut Lebanon

2012-2015

- Design of Brake Pedal Sensor: In charge of developing a new generation of brake pedal sensor to solve the issue of long travel pedal, minimize the mechanical parts to reduce cost and replace them with electronics. Provide 3D model, drawings, FEA simulation and DFMEA. Support Laboratory testing. The application is for automotive brake pedal.
- Design of Switches: in charge of mechanical design and provide 3D model, drawings, simulations and tolerance stackup. The application is automotive.

Mechanical Design Engineer

DTI SAS – Rennes – France.

2011-2012

- Design of Belt, Chain & Screw Conveyor; Silo, Bucket Elevator and Steel Structure: In charge of the mechanical design, provide 3D model and drawings. Studies and calculations of each product to meet the specifications required from the customer. Contact with suppliers and customer. Assist the manufacture engineer for production. The application: is Alimentary and Mud

Mechanical Design Engineer

R&D INRA – Nantes – France.

2010-2011

- Design of Phenotyping Tool: Responsible of developing and design for a special machine for phenotyping. Provide 3D model. Contact with suppliers. The Application is Alimentary.

EDUCATION

Master 2 – Mechatronic Engineer & advanced design

University of Rennes 1 & ENS Cachan – France.

2010-2011

Master 1 – Mechanical Engineering and Sciences

University of Rennes 1 – France.

2009-2010

License degree – Mechanical Engineering and Sciences

University of Rennes 1 – France.

2005-2009

French baccalaureate in sciences

Collège de la Sagesse – Achrafieh-Lebanon

2004-2005

HOBBIES AND INTERESTS

Sports: Ping-Pong, Basketball, jogging

Music: playing piano