

Xavier GROSS

Controls Engineer

I am interested by controls design applied to hybrid and electric powertrains, fuel cells or in the context of advanced driver-assistance systems (ADAS).

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Bristol, BS6 5DA, UK.

// WORK EXPERIENCE

POWERTRAIN CONTROLS CONSULTANT

Dyson Automotive, UK

Oct. 2018 – Today

Jaguar Land Rover, UK

Feb. 2016 – Oct. 2018

- Vehicle applications: battery electric, plug-in hybrid, mild hybrid
- Supervisory controller functions design using Matlab/Simulink/Stateflow
- Led the implementation of the following functions in 2 clients:
 - Dyson: vehicle state determination, high voltage bus activation, gear selection, gradient estimation and optimal torque delivery.
 - Jaguar Land Rover: faults recovery manager, creep mode selection and battery SOC reset.
- Test hardness design (Model-in-Loop)
- Participation in design reviews
- Test and validation at vehicle level (Vector CANalyzer, ETAS INCA)
- Contribution to software architecture and AUTOSAR tool chain definition
- Matlab script design for automated Simulink model design and checks
- Optimisation of the fault recovery manager function (2kB memory saving)
- Calibration tool development (Excel, VBA, PaCo file)
- CEO of XG-R Engineering Ltd, UK

HYBRID SYSTEMS ENGINEER

Jaguar Land Rover, UK

Sep. 2011 – Sep. 2013

- Vehicle supervisory controller's strategy specification (DOORS Rational)
- System decomposition and interface definition (Visio)
- Definition of verification methods
- Test and validation at vehicle level (Vector CANalyzer, ETAS INCA)
- Responsible mainly for the faults recovery manager, the battery dynamic protection and the state of charge protection

INDUSTRIAL IT ENGINEER

Veolia Energy, UK

Mar. 2010 – Sep. 2011

- SCADA¹ systems design & maintenance (RSView32, Factory Talk, VBA)
- Windows applets development (Visual Studio, Excel, Access, SQL, .Net)
- Design of a standardised reporting system to generate automatically benchmarking reports (eSight Energy, Visual Basic Script, SQL)
- Mentored 2 trainee engineers during their internship

TRAINEE CONTROLS ENGINEER

LAMIH², Valenciennes - France

Sep. 2008 – Jan. 2009

- Design of an algorithm to control the position of a hovercraft (Matlab/Simulink)
- Introduction of a TCP/IP protocol in the loop (S-function, C Language, Borland IDE – Delphi)
- Validation per simulation, Model parametric optimisation
- Rapid prototyping validation through a hovercraft model (National Instrument Data Acquisition Card, GPS, modelling equipment)
- Test and Validation of the control strategy

// CAREER BREAK

Backpacking across the Americas

Nov. 2013 – Dec. 2015

- 25 countries visited
- 87,000km achieved mainly by hitchhiking (carbon footprint : 3,5tCO₂eq)
- Atlantic crossing on a 40ft sailing boat (4 passengers, 20 days)
- Cultural exchange through locals (couchsurfing.com)
- 3 languages spoken : Spanish, English and Portuguese
- Monthly article writing for a French local newspaper
- Creation and maintenance of my travel blog (Wordpress)

// COMPUTING SKILLS

Matlab/Simulink	●●●●●●●○○○
Langage C	●●●●○○○○○○
TargetLink (dSPACE)	●●●●○○○○○○
AUTOSAR	●●●●○○○○○○
Embedded Coder	●●○○○○○○○○
MS Office	●●●●●●●○○○
IBM Rational DOORS	●●●●○○○○○○
Vector CANalyzer	●●●●●○○○○○
ETAS INCA	●●●●●●●○○○
CATIA V5	●●●○○○○○○○
Visual Studio 2008	●●●●○○○○○○
VBA/VB .Net	●●●●○○○○○○
SQL	●●●●○○○○○○

// EDUCATION

Trainings

2012-2019

- Foundations of System Safety Engineering Module and ISO 26262 (York University)
- Communication skills workshop
- Advanced driving & proving ground trainings

Mechatronics Master

2007-2010

ENSIAME, Valenciennes - France

- General engineer profile able to take a holistic approach to problem solving in order to increase efficiency and develop innovative applications
- Specialised in controls and automation
- Marks equivalent to 2:1 honours

Preparatory Classes

2004-2007

Lycée Louis Vincent, Metz - France

- Intensive undergraduate preparation for the very competitive entrance exam for French engineering schools
- Studied mainly about mathematics and physics

Baccalaureate

2001-2004

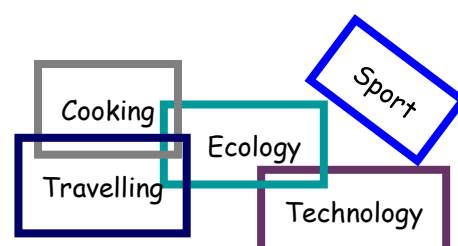
Lycée Louis Marchal, Molsheim - France

- Studied mechanical design, electronics and industrial automation
- Marks equivalent to 2:1 honours

// LANGUAGES

- English : Fluent
- French : Mother tongue
- Spanish : Intermediate

//INTERESTS



¹ SCADA: Supervisory Control And Data Acquisition

² LAMIH: Laboratory of Automation, Mechanics and Human and Industrial Computing