

Career Summary

Specialized in model-driven engineering for more than 9 years, with a high level in C++ development and object-oriented analysis. Worked mainly in the field of complex systems upon concrete instances, oriented towards methodology conception and its computer tooling solution development (Relativized System Engineering RSE: <http://www.mersyse.com>). Comprehensive and in-depth understanding of the design processes, aiming to improve work efficiency, communication between R&D / validation departments and providers, from product specification to test plans, including technical shared resources' specification towards system architecture definition.

Areas of expertise▶ **System engineering** ◀

{ method RSE, Functional / technical specification elaboration for complex systems, multi-contribution calculator management }

▶ **Software design & development** ◀

{strong skills in C++, Qt/QML, SCRUM }

▶ **Model based design** ◀

{UML / SysML based tool modelization, simulation }

▶ **Embedded software** ◀

{HMI prototyping devices }

Educational Background**2002**

Master of science in Electronic systems and Industrial computing specialized in ASICs design, Real Time computing, Object Oriented programming
École polytechnique de l'université de Nantes, Nantes.

1999

BTEC Higher National Diploma in Electrical Engineering and Industrial Computing
IUT de Nice Sophia Antipolis, Nice (1 year intensive course)

1998

Classes Préparatoires aux Grandes Ecoles track Physics, Technology and Engineering Science
Les Eucalyptus high school, Nice

1996

Baccalauréat with honors, scientific section

Work Experience**Since 03/2016 : Valeo**

Créteil

▶ Process / Methods engineering
(Process Methods & Tools Department)

Process and methods standardization

- ALM solution deployment (CoreALM - TeamForge)
 - Participation in CCB and major evolution requests
 - Migration application Serena Dimensions / TeamForge (Python)
 - Link to development and source code
- Software factory : Git / Gerrit usage , branching strategy
- C/C++ Binary package manager: development of OSS Conan inhouse based solution (IT authentication algorithm, Nexus3)
- Continuous integration : Jenkins vs Gerrit sanity checks

03/2015 to 03/2016 : CAP GEMINI consultant

AMADEUS, Sophia Antipolis

▶ Software Engineer
(Hotel Reservation Department)

Hotel Reservation Shopping and Pricing development

- Back end development (C++) for the shopping and pricing team
 - Full development steps till production releases : local, DES, PDT, PRD
 - Quality code requirements
- SCRUM methodology end user oriented
- Specifications, QA testing
- Software factory friendly : Git/stash

07/2014 to 03/2015: PSA

Vélizy-Villacoublay

► Process and Software engineering
(User eXperience and INnovation department)

In charge of integrating innovative HMI means and processes, existing compliants.

- IT Project supervisor for transversal software applications
 - Standardized Slide show presentation application project and development (C++ Qt/QML)
- In charge of the improvement of the HMI specifications and the HMI tooling chain used in PSA (research work in real time 3D platforms, Maya compliant)
 - Define the technical feasibility and the means for integrating innovative HMI solutions, compliant with those in progress (HMI logical / functional layers)
 - Define and ensure deliverables for internal different clients
 - HMI Simulation viewer application : API specification and technical documentation
 - Industrialize new tooling chain for the art-design and specifications departments
- HMI Product innovations creation and development (C++ Qt/QML)
- Embedded software integration on the owned prototyping solutions.

01/2011 to 07/2014 : PSA

Belchamp / Sochaux / Vélizy-Villacoublay

► Modeling and Software engineering
(HMI specification department)

Model-driven engineering technical solution head with the following scope: specifications modeled under UML/SysML editor (Artisan) – HMI simulation done with generated C++ code inside a standard IDE (QtCreator)

- In charge of the Model-Based Code Generation and simulation activities.
 - Conception of the patterns used in UML models
 - SW Technical leader
 - Development of the libraries used for the tooling process and utilities : subscription to services, internal messaging, cross-application management with TCP (preprocessor, template compilation hard use), SQL database management (C++11)
 - Simulation application / Qt project definition and industrialization : MVC pattern architecture, qmake language
 - Artisan software evolution requests and following
- HMI functional specification: UML/SysML modelization (Artisan)
- Realization of demonstrators and prototypes on embedded platforms. (Linux)
- HMI application prototypes
 - 2D viewer: Data processing from a Simulink model (OpenGL, SDL, C++).
 - 3D user-oriented simulation tool feasibility: integration of models from Simulink, Artisan or Rhapsody (C++)

09/2009 to 12/2010 : APSYS consultant - EADS

PSA, Belchamp

► System / Methods and tooling engineering
(Product definition department)

Conceptual and practical development of the System Engineering method RSE (Relativized System Engineering)

- Development of the methodology RSE (conceptor: H. Boulouet)
 - Participation in the conceptual work
 - MOF models realization under Topcased (EMOF meta model and UML profile)
 - In charge of the technical solutions, compliants with the theoretical concepts : implementation patterns (C++)
- Realization of automatic generation of the contractual documents from Rhapsody UML models (technical and functional specifications)
 - Generation templates development (Reporter Plus, Q language script)
 - Rendering engine development for Microsoft Word document (VBA)
- Development of the UML editor customization application (Java for Rhapsody) for the use of the RSE language
 - RSE UML profile definition and HMI development for the front panel editor
 - Generated sources from the MOF meta model (Acceleo tool, java language)

09/2006 à 01/2009 : SERDEV consultant
PSA, Sochaux

► System / Methods and tooling engineering
(Electrical & Electronic department)

Conceptual and practical development of the System Engineering method RSE

- RSE methodology work axes
 - Participation in the conceptual work and the meta models definition (EMF, ECore, Kermet) : definition of the structural and organizational concepts to deal with (system, contribution, service, complexity, architecture, and the way it can be tested)
 - Real time models study for automatic testing
 - Requirement traceability problematic analysis
- Analysis, modelization and simulation under UML/SysML (Rhapsody) of different services and complex systems (product / technical object), in interaction with the technicians and engineers using RSE.
 - Product level modelization (binnacle comfort: driver reception, automatic configuration).
 - System level modelization (Child safety, window regulator, retrovision).
 - Calculator level modelization (Driver door calculator, memorization calculator)
- Development of the UML editor customization application (Java for Rhapsody) for the use of the RSE language
 - Architecture 3 tiers, software design with GOF Patterns

05/2005 à 09/2006 : SERDEV consultant
PSA, Sochaux

► Modeling and Software engineering
(Electrical & Electronic department)

HIL (Hardware In the Loop) prototyping and modelization solutions development

- Calculator modelization under StateMate : retractable roof calculator, CAN / LIN functions, specification based
- Hardware in the loop prototyping study with CAN interface (CANoe 5.1) :
 - Cross applications StateMate -> CANoe
 - Testing on integration table and in vehicle
- Development of an auto-adaptative system for the climate regulation (MATLAB / Simulink R12)
 - HMI development, climate modelization
 - AI Learning function and conception of a real time cartographies update

09/2004 to 04/2005 : SEGIME consultant
AUDI AG, Les Mureaux

► Mechanical and software engineering
(Research department)

Conception and realization of an application aiming to improve human feelings in driving situation based on nonlinear suspension models.

- 2D vehicule mechanical modelization (Simulink), 2 degree of freedom.
- Application development (Matlab)
 - Software main modules: user interactive parameter editing, extraction of nonlinear parameters, viewer.
 - Calculus procedures: step response, transfer functions, calculation of the comfort evaluation criteria (driving comfort and low frequency variation of normal forces on the tires) with the possibility to vary parameters 0-2, in time and frequency domains.
 - Extraction of the gain / phase from identified parameters from measures in test benches

10/2002 to 08/2004 : SEGIME consultant
Sneema Moteurs, Villaroche

► Electronics and software engineering
(Measures analysis department)

Study of a real time system aiming to warn early pumping in turbojet reactors

- Software development and test measures analysis for the supervisor system of the active control of pumping CLEAN (Matlab/Simulink)
 - Supervisor system understanding, based on a frequency analysis
 - Synthesis and document redaction.
- Feasibility study, conception and realization of a real time supervisor based on the detection of air bubbles
 - PhD work understanding and real time solution compliance
 - Numeric calculator conception (acquisition and real time data processing)
 - Application development (Matlab)

Technical Proficiencies

Languages	C++, Python, QML, UML/SysML Matlab, JAVA, Q Language, Php/MYSqI
Softwares	TeamForge, Qt, Artisan, Rhapsody, Matlab Simulink , Eclipse Topcased, MSVC++
Methods	RSE (Relativized System Engineering), Object Oriented system conception, MCSE (Méthode de Conception de Systèmes Electroniques : specialized in ASICs design)

Languages

- **English** : fluent (610 points for TOEFL in 2001, 970 for TOEIC in 2010)
- **Japanese** : notions
- **Italian** : notions
- **German** : notions

Miscellaneous

- Member of the scientific association adMCR (*association pour le développement de la Méthode de Conceptualisation Relativisée*), chaired by the professor of theoretical physics, Ms. Mioara Mugur-Schächter
- Music: play guitar, musical events participation.
- Jujutsu: 1st dan