

FLEUCHEY Fabrice

79 rue Henri Brisson  
78500 Sartrouville  
France

Email : [fabrice.fleuchey@free.fr](mailto:fabrice.fleuchey@free.fr)

Phone : +33 641 735 761

Social network : <https://www.linkedin.com/in/fabrice-fleuchey-19731941>

Website : <https://www.mersyse.com>



## Expertise in System Engineering

(need analysis, requirement engineering, design, integration, test, validation, qualification)

## and Information Management

(PLM, ALM, MLM, collaborative platform, configuration)

### *Main Skills*

- Embedded product development (onboard computer, mechatronic system) in many environments (terrestrial, avionic and space): specification (need, requirement), design (model), test, regulatory qualification, and commissioning.
- Operational PLM (“Sonia” IDE) tool development, commissioning, and support: requirement, documentation, file, configuration and product management, project and user management, lifecycle management.
- Business and project management of collaborative development in extended enterprise.
- Research, training, change management, decision support, popularization in System Engineering and information management

IDE: Integrated Development Environment; PLM: Product Lifecycle Management.

### *Main Achievements*

- **Development, commissioning, and support of Information System adapted to extended enterprise**
  - RIM development (ALM, PLM, CM, DM, KM, ...) in collaboration with PhD. H. Boulouet, based on RS formal method
  - RIM IDE prototype development, commissioning, and support (operational “Sonia” tool in Stellantis)
    - Engine control command management (400 international users, 50000 specifications and models, 10 years of usage)

ALM: Application Lifecycle Management; CM: Configuration Management; DM: Documentation Management; KM: Knowledge Management; RIM: Relativized Information Management.

- **Contribution to System Engineering projects**
  - Automotive System Engineering (ASE) approach of Stellantis: drafting and implementation of processes, organization of joint discussions that led to conversion to RSE.
  - Relativized System Engineering (RSE): implementation, diffusion, and training in Stellantis

## ■ Business and project management

- Business manager “method and tools” in department for development of engine and gearbox control command (Stellantis)
- Project manager of EW engine control command family (Stellantis)
- Project manager of fire control and communication systems for French Leclerc tank (Nexter)

## ■ Product Development

- Laser rangefinder for fighter mirage F1-CT (Thales)
- Web site [www.mersyse.com](http://www.mersyse.com) with PhD. H. Boulouet

## Technical Skills

- **Domains** : ALM/PLM, Electronics, KM, MBSE, Mechanics, Quality Assurance, Safety, System Engineering (SE)
- **Languages** : Assembler, Basic, CSS, DSP, HTML, Java, PHP, UML, VB
- **Methods** : Relativized System Engineering (RSE), Relativized Information Management (RIM)
- **Tools** : Eclipse, Enterprise Architect, Doors, IntelliJ Idea, JIRA, Matlab Simulink
- **Standards**
  - SE : EIA-632, IEEE-Std-1220, ISO-15288
  - Safety : ISO-26262, MIL-HDBK-217, MIL-Std-882
  - Project : CMMi, IEEE-Std-1490 (PMBok)
  - Space : ESA, MIL, TRW
  - Software : ISO-IEC-15504 (SPICE), ISO-IEC-IEEE-12207 (SWEBoK)

MBSE: Model Based System Engineering; PMBoK: Project Management Body of Knowledge; SWEBoK: SoftWare Engineering Body of Knowledge.

## References

- M. Yves Poirot
  - Position : retired from Stellantis – Head of “engine and gearbox control command” department.
  - Relation : Service “Method and tools” manager in its department.
  - Email : [yves.poirot@gmail.com](mailto:yves.poirot@gmail.com)
- M. Tanguy Bruères
  - Position : Bpifrance – Operational excellence manager - Black Belt Lean Six Sigma
  - Relation : Configuration Management expert in its service “Method & tools”.
  - Phone : + 33 677101278 - Email : [tanguy.brueeres@gmail.com](mailto:tanguy.brueeres@gmail.com)
- M. Michel Roux
  - Position : Stellantis – Head of service “Software Engineering – Powertrain & Hybrid”
  - Relation : “software quality assurance” responsible in its service.
  - Phone : +33 688317556 – Email : [michel.roux1@mpsa.com](mailto:michel.roux1@mpsa.com)
- M. Bruno Nicolas
  - Position : Apside – Expert in System Engineering and Information System.
  - Relation : Stellantis collaborator in support and training for “Sonia” tool (RIM IDE prototype).
  - Phone : +33 651395678 – Email : [brunonicolas29@gmail.com](mailto:brunonicolas29@gmail.com)
- M. Christian Auzet
  - Position : retired from Stellantis – Project manager of ASE approach
  - Relation : Collaboration in building and implementation of SE processes, organization of joint discussions that led to conversion to RSE, display of “Sonia” tool (RIM IDE prototype).
  - Email : [christian.auzet@noos.fr](mailto:christian.auzet@noos.fr)

- M. Patrice Elu
  - Position : retired from PSA – Former Information System and PLM expert
  - Relation : RSE analyst and contribution to the development of “Sonia” tool (RIM IDE prototype),
  - Email : [patrice.elu@wanadoo.fr](mailto:patrice.elu@wanadoo.fr)
- M. Yves Sarazin
  - Position : Stellantis – Project manager for enterprise archiving system.
  - Relation : Stellantis Information System architect, collaboration in “Sonia” tool (RIM IDE prototype) development.
  - Email : [yves.sarazin@gmail.com](mailto:yves.sarazin@gmail.com)

## *Education*

- 1986 **ENSEA** : Electronic engineer, option telecommunication  
Start of organization management study
- 1999 Start of neurosciences and psychology studies
- 2005 **ASE** : Contribution to this project, investigation to numerous international SE approaches, AFIS referent for Stellantis
- 2008 Start of phenomenology and constructive epistemology studies
- 2014 **adMCR, ORCA** : Method of Relativized Conceptualization (MRC) study – Contribution to build RS method, radically constructive and relativized, dedicated to design of technical-scientific tooled methods – Foundation of Relativized Information Management (RIM) method – Understanding and operational implementation of Relativized System Engineering (RSE) method.  
**W3School** : CSS, HTML and PHP studies
- 2018 **Openclassroom** : JAVA EE study

ASE: Automotive System Engineering; RS: Relativized Systemic.

## *Language*

- GERMAN First language (twelve years of study) – stay in Berlin, Rhineland, and Bavaria.
- ENGLISH Second language – training course to David Game College of London – professional usage.

## *Experience*

Since 2005



**ORCA (and adMCR)** – Paris region (France)  
Radically Constructivism  
Method & Tools

- **Relativized Systemic (RS)** : proofreader for thesis of PhD. H. Boulouet.
- **RS Metamodel** : contribution to EMF (Eclipse Modeling Framework) modeling.
- **RS Communication** : contribution to several presentations and drafting of illustrative leaflets.
- **RSE and RIM training** : contribution to drafting of training course (40 hours), at the request of ESIGELEC engineering school (Rouen) for students in second and third year of study. Stellantis refusal to deliver them.
- **ORCA web site** : contribution to development of web site, that mediates methodological RS works and its RSE and RIM industrial operational applications, during last twenty years.



**Duration** : since 2020

**Position** : Quality assurance responsible for Battery Management System (BMS) software project.

**Achievements** :

- Drafting of Quality Assurance Plan (QAP) and control of its implementation, System Engineering (SE) and Project Management (PM) consulting : drafting of improvement plans.
- Requirement reviews.

**Duration** : from 2012 to 2019

**Position** : Configuration management expert.

**Achievements** :

- Methodological tool development based of “Sonia” tool (RIM IDE prototype) to manage lifecycle and configuration of Powertrain models : Model Based System Engineering (MBSE) – Model Life Cycle Management (MLM).

**Duration** : from 2004 to 2011

**Position** : Head of service “Method and Tool” for department “Engine and gearbox control system”, leadership in System Engineering (SE).

**Achievements** :

- Promote Relativized System Engineering (RSE).
- Design and implementation of Matlab tool framework to gather all local management tools.
- Agile development, based on RS, of an MRI EDI operational prototype to manage engineering deliverables: **Sonia**.
- User support and training for **Sonia** (more than 400 users a day, more than 50000 engineering deliverables (requirement specification, model) for 40 engine projects for 10 years).
- Contribution to ASE Stellantis SE approach: analysis, lighting effect on methodological inconsistencies and traps.
- Organization with Renault SA of the first SIA journey dedicated to System Engineering (SE) and focused on Relativized System Engineering (RSE) as Model Based System Engineering: (MBSE) formal framework: focus on contractualization of requirements.
- Elaboration and proposal of CIFRE thesis subject about neural network modeling for engine actuators control command. Collaborative meeting with research centers: ECS of ENSEA (servomechanism, chaotic system, diagnosis), INSERM (neurosciences – cerebellar cortex modeling) and IRSEEM (thermal engines control system).
- INCOSE and AFIS membership: contribution to “System Architecture” and “IVVQ” working groups.

**Duration** : from 2002 to 2003

**Position** : method & tools expert for engine control system projects.

**Achievements** :

- System Engineering (SE) principles and project management implementation for engine control system developments (requirement management, organization, cost profiles, configuration management of artefacts (ECU, Hardware, and software)).
- Contribution to ASE Stellantis SE approach.

**Duration** : from 1999 to 2001

**Position** : Engine EW control system project manager.

**Achievements** :

- Project management for thermal engine family development (more than 400 vehicle use cases), creation of team project (20 collaborators: product managers, designers, and validators).
- Design and implementation of tool process for engine control system configuration management (3 vehicles use cases per week), in relation with SAP data.
- Qualification of supplier processes, technical support for purchase and quality departments.

**From 1996 to 1998**



**Matra Marconi Space** – Paris region (France)  
Space Industry – Military Domain (NATO)  
Telecommunication satellite platforms SKYNET

**Position** : Electronic part supply manager.

**Achievements** :

- Electronic part supply: availability, quality, alerts, qualification, specification (DoD, ESA, TRW).
- Integration to UK team project (from Stevenage) and relations with MoD.
- Qualification of configuration management tools, “Surf” for production and “Sprint” for engineering. Contribution to ISO 9000 certification.

**From 1993 to 1995**



**GIAT Industries** – Paris region (France)  
Ground Vehicle Industry – Military Domain  
Leclerc tank – Fire control system and communication network.

**Position** : Project manager for development.

**Achievements** :

- Suppliers’ management: DASSAULT Electronics for fire control system development and SAGEM for communication network.
- Requirement and design review (including Safety) organization, environmental qualifications (electric, electromagnetic compatibility, humidity, mechanics, thermal).
- End-product acceptance, technical support for purchase department.
- Material resources management (computer-aided design station, IVVQ bench, computer-aided software engineering).

**From 1991 to 1992**



**Thomson TRT Defense** – Paris region (France)  
Avionics Equipment Industry – Military Domain  
Laser Rangefinder TMV630 for fighter Mirage F1-CT

**Position** : Project manager for development

**Achievements** :

- Mechatronic development based on 68020 microprocessor platform (computer-aided software engineering associated) with multiple communication network (1553, ARINC and Digibus).
- Computer-aided design for programmable parts, IVVQ (production and maintenance).
- Requirement specification.

**From 1989 to 1990**



**General Electric** – Paris region (France)  
Health Industry – Civil Domain  
X-ray generator for medical imaging

**Position** : IVVQ manager.

**Achievements** :

- Control command adjustment for power thyristors (100 kW).
- Maintenance documentation, health standard certification.

**During 1988**



**Renault Automation** – Paris region (France)  
Robotics Industry for Automotive – Civil Domain  
Assembly robot for production

**Position** : Specifier

**Achievements** :

- Drafting of requirement specification for control command of brushless asynchronous electric motor with high precision resolver.

## *Other activities*

**Knowledge** : Epistemology and philosophy of sciences.

**Reserve officer** : Air Force (BA 721), former telecommunication instructor.

**Scuba diving** : E2 (CMAS \*) instructor, guide for handicapped person.