



WEDNESDAY, MAY 31st

9:30-10:00 Welcome address

Nicolas Trèves – CNAM (F)

10:00-11:00 Session 1 Inaugural lectures, Part 1

Autonomous vehicles, AI, Software Engineering, and Systems Engineering
Claude Lurgeau – Intempora & VEDECOM (F)

11:00-11:30 Break

11:30-12h30 Session 1 Inaugural lectures, Part 2

Data sharing in Extremely Resource Constrained Environments
Angelo Corsaro – ADLINK Technology Inc (F & GB)

12:30-14:00 Lunch

14:00-17:00 Tutorial

Complex systems, or How to recognize and tame the dragon in your house
Dr Joseph K. De Rosa – Consultant (Boston, USA)

14:00-16:00 Session 2: Project estimation, monitoring & management

Part-1 14:00-15:00

SQUARE for SCADE: A novel tool – Presentation & Demo

Cyril Benkimoun – Squaring (F) and François-Xavier Dormoy – Ansys (F)

Part-2 15:00-16:00

Software development outsourcing: How to master quality

Benjamin Clamme & Franck Sadmi – Bureau Veritas (F)

A set of novel tools for improving project estimates

Patrick Hamon & Eric Bellet- Estimancy (F)

16:00-16:30 Break

16:30-17:30 Session 2 cont'd

Software systems modeling and function points: How to map UML/SysML objects on function points components
Bernard Mesdon – ASSEMI & CNAM

Non-functional user requirements and project constraints: Update on software effort estimation approaches

Lionel Perrot – ASSEMI & Semantys (F)

TUTORIAL: Wednesday, May 31, 2017, 14:00-17:00

Complex Systems, or How To Recognize and Tame the Dragon in Your House

Dr Joseph K. DeRosa, Consultant (USA)

Have you ever heard the expression, *Life is what happens to us while we are making other plans*? How about, *it does not do to leave a live dragon out of your calculations, if you live near him*?

Well, for all our good plans, we systems and software engineers are still plagued with cost overruns and schedule slips. The philosophical among us shrug, "*C'est la vie*." Some simply make a plan and double the cost and schedule estimates. But could it be that systems and software have become more like life than Newtonian physics? Is there a big, ferocious dragon in our development environment that we are leaving out of our calculations?



This brief tutorial discusses how to recognize and tame the dragon in your systems. Its name is COMPLEXITY. We will define complexity and discuss how the development of complex systems differs from traditional developments. We will present strategies for complex systems engineering. Armed with this information, system/software engineers or engineering managers can decide whether to move to the countryside where there is no dragon (develop simple systems that solve only simple problems), fight the dragon (suffer cost and schedule overruns—sometimes the dragon wins), or tame the dragon (understand the nature of complexity).

The Presenter:

Dr Joseph K. DeRosa has over 25 year experience in software and systems engineering. He retired from the MITRE Corporation as Director of Systems Engineering, where he oversaw the development of numerous major programs and participated in research in complex systems. He is now an industry consultant specializing in complex systems engineering. He has delivered papers on the subject worldwide at IEEE, INCOSE and ICSSEA conferences. He was a former staff member at Massachusetts Institute of Technology (MIT) Lincoln laboratory and Director of Business Development for LINKABIT Corporation, as well as an industry consultant to many aerospace firms. He has a PhD in Electrical Engineering and did post-graduate studies at the Santa Fe Institute, the New England Complex Systems Institute and Babson College Business School.

THURSDAY, JUNE 1st

9:00-9:30 Session 3: AI & Requirements

Using AI for measuring the eligibility of text snippets for requirements analysis
Christian Winkler – AAU (A)

9:30-10:00 Session 4: Cryptology

A discussion on the Diffie-Hellman cryptanalysis
Gérard Memmi & Matthieu Rambaud – Telecom Paristech (F)

10:00-10:30 Break

10:30-11:30 Session 5: Collaborative engineering

ShareAspace: An approach to collaborative engineering
Christian Giraud – Step Engineering (F & S)

11:30-12:30 Session 6 TBA

14:00-14:30 Session 7-part 1: IoT-1

ConnexSensors: An open IoT solution designed for and by industrials

Catherine Devic – EDF (F), Erwan Livolant, Jean-Patrick Carrié – AFNet, Pascale Minet – INRIA (F) & Patrick Bellot – Telecom Paristech (F)

14:30-15:30 Session 7- part 2: IoT-2

Testing of IoT applications and infrastructures

Sascha Kretzschmann, Michael Wagner, and Axel Rennoch – Fraunhofer FOKUS (D)

Session 8 Invited Lecture

An AI platform for voice-enabled devices

Joseph Dureau & Rand Hindi – SNIPS (F & USA)

FRIDAY, JUNE 2nd – NEPTUNE 2017

8h45- 9h00: NEPTUNE 2017: Introduction

Agusti Canals – CS Communication & Systèmes

Thierry Millan – IRT

9h00 - 9h30: Using the Capella platform

Pierre Gauffillet – IRT Saint Exupéry

9h30 - 10h00: The SBoCS workbench

Philippe Desanois – CS Communication & Systèmes

10h00-10h30: Break

10h30 - 11h00: A survey of the Capella ecosystem

Samuel Rochet - OBEO

11h00- 11h30: An experience return: Capella in teaching

Emmanuel Grolleau - Ecole Nationale Supérieure de Mécanique et d'Aérotechnique

11h30 - 12h30: Round Table : la mise à disposition d'outils de qualité et « open source » est-elle un accélérateur suffisant pour l'adoption de l'IDM dans des projets industriels ?

Animateur : Agusti Canals – CS Communication & Systèmes

Participants : Pascal Roques - PRFC, Étienne Juliot - Obeo, Pierre Gauffillet - IRT Saint-Exupéry, Philippe Desanois - CS Communication & Systèmes, Emmanuel Grolleau – ENSMA, Samuel Rochet - OBEO

14h00 - 15h30: Tutoriel Capella : Part 1

Pascal Roques – PRFC

15h30 - 16h00: Pause

16h00 - 17h30: Tutoriel Capella : Part 2

Pascal Roques – PRFC

17h30 - 18h00: Conclusion

Agusti Canals – CS Communication & Systèmes

Thierry Millan – IRT

Les journées de travail « NEPTUNE »

Instituées sur l'initiative de quatre membres du consortium NEPTUNE –

<http://neptune.irit.fr> – (Nice Environment with a Process and Tools Using Norms and

Examples) et organisées avec le concours de la revue Génie Logiciel, les journées

« NEPTUNE » ont pour vocation de constituer un lieu de rencontre, au travers de

présentations et tables rondes, pour les différents acteurs des mondes du génie logiciel et

de l'ingénierie de systèmes concernés par l'utilisation et l'évolution des processus de

développement logiciel basés sur les modèles. *Ces journées ont ainsi un double rôle*

d'évaluation critique et de veille technologique.