Introduction to UML and Formal Methods

[1]J. Paul Gibson and [2]Isabelle Perseil

[1]Telecom & Management SudParis
9 rue Charles Fourier, 91011, France

[2]Inserm
101 rue de Tolbliac, 75013 Paris, France

[1]**Paul.Gibson@it-sudparis.eu**

[2]**Isabelle.perseil@inserm.fr**

It is with great pleasure that we introduce the **5th IEEE International Workshop on UML and Formal Methods**. Already, in its short 5 year history, the workshop has been located across the globe: Japan, Brazil, China, Ireland, and – this year – in Paris, France. For its first 3 years it was co-located with the *International Conference on Formal Engineering Methods*, whilst in the last 2 years it has been part of the *International Symposium on Formal Methods*. The workshop has a strong tradition of publishing the highest quality accepted papers in either: the NASA journal of "Innovations in Systems and Software Engineering", or the ACM journal "Software Engineering Notes" (to whom we have returned this year).

The main objective of the workshop has not changed during its lifetime, namely: the building of bridges between informal, semi-formal and formal notations. This objective can be seen in each of the 4 main themes that make up the four sessions of this year's workshop: I. UML diagram formalization, II. Dynamic and real-time modeling, III. Transformations, and IV. Patterns and blocks. Across all sessions a wide range of formalisms and tools are presented – *Extended Hierarchical State Transition Matrices and CSP, the SMT solver Yice, MADES UML and metric temporal logic, UML-MARTE and Time Transition Systems, Colored Petri Nets, Behavioural types and Coq, QVT-R and XSLT, EMF Modeling Operations, ASTD and SysML* – illustrating the breadth and depth of the research being done by our community.

We hope that you enjoy reading these papers as much as we have: the bridges are being built and we invite you to cross them.