

Three INRIA groups will take part in NESSoS: [ARLES](#) , [CASSIS](#) , and [TRISKELL](#) . INRIA, the French national institute for research in computer science and control, operating under the dual authority of the Ministry of Research and the Ministry of Industry, is dedicated to fundamental and applied research in information and communication science and technology (ICST). The Institute also plays a major role in technology transfer by fostering training through research, diffusion of scientific and technical information, development, as well as providing expert advice and participating in international programs.

Research and networking expertise

[TRISKELL](#) at INRIA Rennes Bretagne Atlantique has about 20 researchers focussing on model driven development, model-based testing and model analysis. Triskell is particularly interested in component based reactive and large scale distributed systems with quality of service constraints, including reliability, performance, timeliness etc. It has a long tradition in MDD for real time embedded systems, and has participated to several of the OMG (Object Management Group) standards. The group is currently part of the STREP Diva project in which focuses on future applications of MDD at runtime for dynamic adaptation, the S-CUBE NoE on Software Services and Systems, in which the group develops mechanism for adaptive services and the ARTEMIS CESAR project which focuses on model-driven development techniques for real-time embedded systems. The [CASSIS](#) research group at INRIA Grand Est is internationally known for its work on formal methods, automated software verification and testing, with expertise in security protocols and distributed collaborative systems. CASSIS is actively engaged in multiple national and international projects (e.g. over 10 national and 4 European projects started in the last 5 years). Among the currently running ones are FP7 Strep AVANTSSAR, and FP7 IP Secure-Change. Close collaboration with industry has been developed, and a software verification company has been successfully founded by members of the group. CASSIS research group has about 20 members located in Nancy and Besancon. The research group has a good track record of training and networking, mainly in educational and training programs for bachelor and master students. CASSIS is heavily involved in a master program in Computer Science, with a track on formal methods and one on distributed systems with strong emphasis on secure software. CASSIS also coaches yearly around 4 students during their MSc thesis and in average 3 PhD students graduate every year in the group. Middleware infrastructures enabling ambient intelligence in the hybrid network, dealing in particular with resource constraints of wireless devices and exploitation of heterogeneous wireless networks, from ad hoc to infrastructure-based, networks, and experimenting with service-oriented architectures. Architecture-based development of distributed systems, focusing in particular on the dynamic composition of distributed systems from architecture description. Our current research work is more specifically centred on the development of distributed systems enabling pervasive computing and in particular ambient intelligence applications. Towards that goal, we are conducting research in the two following complementary areas: The [ARLES](#) INRIA project-team investigates solutions to architecture-based development of distributed systems, in order to support the composition of systems offering quality properties (also referred to as non-functional

properties) to users. In that context, we study the definition of languages, methods, tools and supporting middleware infrastructures, which ease the development of distributed systems by offering solutions to automated design, analysis and construction of systems.

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