Job Posting

ALES is a United Technology (UTC www.utc.com) company with offices in Rome and Trento, Italy, specialized in model based technologies and methodologies for the design and verification of distributed safety critical embedded systems. ALES' competences cross several application domains, such as avionics, refrigeration and building automation, and several disciplines, such as formal and run-time methods for verification of hybrid and discrete systems, requirement and safety analysis and design flow integrations. ALES provides services and innovation to an international network of UTC customers and offers a collaborative and stimulating working environment for candidates looking for a challenging and valid career.

Application:

Applicant should send the information to the following contact:

Contact information: donatella.santillo@ales.eu.com

Application should add to their CV the following consensus statement to allow ALES to treat the information in compliancy with the Italian privacy law:

Autorizzo ALES S.r.l. al trattamento dei dati personali, ivi compresi quelli sensibili, ai sensi del D.Lgs 196/2003 e successive modifiche, per le finalità di cui al presente avviso di candidatura.

I authorize ALES S.r.l. to the processing of personal data, including sensitive ones, pursuant to Legislative Decree 196/2003, as amended, for the purposes set out in this notice of candidacy.

Embedded Systems Engineer

Job Responsibilities	ALES s.r.l. invites qualified individuals to apply for a Research Engineer position on embedded systems and networks.
	The successful candidate will provide technical expertise in the area of safety critical distributed embedded systems, with an emphasis on model based techniques and formal methods.
	The candidate must be able to work in a multinational team environment focused on innovation techniques
Education	The minimal education requirements are a Ph.D. in electrical engineering or computer science, or a MS in the same areas supplemented by two years of industrial research after the degree in disciplines described below.
Experience/Qualifications	The candidate shall possess an in-depth knowledge and ability to apply and develop model based methods and technologies for the design and verification of networked embedded systems. The candidate shall have an in-depth knowledge of embedded system architectures, real-time operating systems and embedded communication protocols and capable of applying and developing analytical methods for the design and verification of such systems. The candidate should be proficient in modeling with languages such as Modelica, Simulink/Statflow, AADL, UML and SysML and in C/C++/Java programming.
	The ideal candidate should also have a good knowledge of some of the following areas: requirement formalization and analysis, safety analysis (FTA, FMEA), model checking, optimization techniques, timed-automata and hybrid systems modeling and verification, stochastic models, synchronous systems and automatic test generation.
	In addition to technical excellence, very strong teaming and communications skills including the ability to interact with experts in different engineering disciplines are essential.
	The candidate must possess record of technical contributions, including patents and publications in refereed technical journals.
	The candidate must be fluent in English.
Additional Comments	

Senior Engineer on Formal Methods

Job Responsibilities	ALES s.r.l. invites qualified individuals to apply for a Research Engineer position on formal methods for embedded system design and verification.
	The successful candidate will provide technical expertise, leadership and direction in the development of formal methods and their application to the design, validation and verification of safety-critical distributed embedded systems.
	The candidate must be able to work in a multinational team environment focused on innovation techniques
Education	The minimal education requirements are a Ph.D. in electrical engineering or computer science with more than 2 years of industrial experience, or a MS in the same areas supplemented by 5 years of industrial research after the degree in disciplines described below.
Experience/Qualifications	The successful candidate shall possess experience in developing and application of formal methods for the verification and validation of real-time embedded systems.
	The candidate should have a proven experience on several of the following areas: formal verification theory (bounded model checking, symbolic model checking, etc.), formal verification technologies (required experience with model checkers, SAT solvers, SMT solvers, etc.), statistical model checking, constraint solving and optimization, equation and block based languages (Modelica, Simulink/Stateflow), test metrics and test automation.
	The ideal candidate should also have a good knowledge of some of the following areas: requirement formalization and analysis, safety analysis (FTA, FMEA), timed-automata and hybrid systems modeling and verification, stochastic models, synchronous systems and automatic test generation.
	The ideal candidate should also have a proven experience in: C/C++ programming, model driven engineering (e.g. UML, SysML, EMF), and Java programming
	In addition to technical excellence, very strong teaming and communications skills including the ability to interact with experts in different engineering disciplines are essential.
	The candidate must possess record of technical contributions, including patents and publications in refereed technical journals.
	The candidate must be fluent in English.
Additional Comments	

Senior Engineer on Model Driven Engineering

Job Responsibilities	ALES s.r.l. invites qualified individuals to apply for a Research Engineer position on model driven engineering for embedded system design and verification. The successful candidate will provide technical expertise, leadership and direction in the development and application of model driven techniques to the design, validation and verification of safety-critical distributed embedded systems. The candidate must be able to work in a multinational team environment focused on innovation techniques
Education	The minimal education requirements are a Ph.D. in electrical engineering or computer science with more than 2 years of industrial experience, or a MS in the same areas supplemented by 5 years of industrial research after the degree in disciplines described below.
Experience/Qualifications	The successful candidate shall possess experience in developing and application of model driven techniques to the design, validation and verification of software. The candidate shall have a proven experience on several of the following areas: Ecore software modeling, Eclipse technologies (PDE, EMF), modeling transformation methods and technology (QVT), UML profiles, Java programming, UML/SysML system modeling, GEF technology, OWL and RDF technology, OSLC standard and Java programming. The ideal candidate should also have a good knowledge of some of the following areas: formal verification theory (bounded model checking, symbolic model checking, etc.), constraint solving and optimization, equation and block based languages (Modelica, Simulink/Stateflow), requirement analysis, safety analysis, timed-automata and hybrid systems modeling and verification, stochastic models, synchronous systems and graph theory. In addition to technical excellence, very strong teaming and communications skills including the ability to interact with experts in different engineering disciplines are essential. The candidate must possess record of technical contributions, including patents and publications in refereed technical journals. The candidate must be fluent in English.
Additional Comments	

Senior Engineer on Model Based Technology

Job Responsibilities

ALES s.r.l. invites qualified individuals to apply for a Research Engineer position on model based technology for embedded system design and verification.

The successful candidate will provide technical expertise, leadership and direction in the development and application of model based technology to the design, validation and verification of safety-critical distributed embedded systems.

The candidate is expected to interact with United Technologies System Control Engineering Program and Technology Leaders and United Technologies Corporation (UTC) business units to create opportunities, participate in the acquisition of contract awards, enhance engineering efficiency and product features in existing programs, deploy model based technology, methodology and competence to the business unit engineering and provide technical contributions in the areas model based design.

The candidate must be able to work in a multinational team environment focused on innovation techniques

Education

The minimal education requirements are a Ph.D. in electrical engineering or computer science with more than 2 years of industrial experience, or a MS in the same areas supplemented by 5 years of industrial research and development after the degree in disciplines described below.

Experience/Qualifications

The successful candidate shall possess experience in developing and application of model based technology to the verification and validation of real-time embedded systems. The candidate should have experience on state-of-the-art industrial tool-chains based on Matlab/Simulink, Polyspace, Scade, Dymola, Rhapsody, Papyrus, Doors and product life management tools (e.g. Jazz)
In addition, the candidate should have a proven experience on several of the following areas: development process for safety-critical embedded system (ISO26262, DO178, IEC 61508), requirement capturing, analysis and tracing, MIL, SIL, PIL and HIL technology, tool-chain integration, embedded software architecture, build and test automation.

The ideal candidate should also have a good knowledge of some of the following areas: safety analysis, formal verification technologies, C/C++ programming, model driven engineering (e.g. UML, SysML, EMF), and Java programming

In addition to technical excellence, very strong teaming and communications skills including the ability to interact with experts in different engineering disciplines are essential.

The candidate must possess record of technical contributions, including patents and publications in refereed technical journals.

The candidate must be fluent in English.

Additional Comments