Teaching profile

To intervene on the following training courses:
DUT, Licence professionnelle METINET and IEM

Educational objectives and tutoring requirements:
the assistant professor will teach into the department of Computer Science of IUT Lyon1, Bourg-en-Bresse site. The candidate will be required to teach courses on the site, DUT and LP. Interventions should be carried out in the area of software modeling and more specifically with UML. The candidate must therefore have strong skills in object oriented development. Solid experience in this field will be an important criterion.

In addition, the candidate will be involved in the animation of the on-site teaching team, in the monitoring of projects and internships and participate in the activities of the department.

Research profile

Management and exploitation of large amounts of data

DRIM Team Requirements
The DRIM Team focuses its research on distributed and mobile systems, security/privacy, and information retrieval. At the core of a very dense international network, the team coordinates the international doctoral college «Multimedia Distributed and Pervasive Secure Systems» (MDPS; https://www.dimis.fim.unipassau.de/MDPS/fr/), jointly with the Universities of Passau, Germany and Milan, Italy. The assistant professor who will be recruited, will actively participate in all the scientific activities of MDPS (PhD student co-supervision, ste-up and coordination of European and bilateral projects...).

For this position, the DRIM Team is seeking candidates with strong competences related to the MDPS scientific topic «Data Management in Distributed and Mobile Systems: robustness and fault tolerance in distributed and/or mobile systems, protocols of reliable dissemination of information in distributed systems (mobile networks, hybrid clouds, P2P networks), pervasive and ubiquitous computing (context-aware applications, multimedia content adaptation), and security/privacy.

Soc Team Requirements
This position will highly reinforce the Service and cloud oriented Information Systems topic of the SOC research team. Cloud and service-oriented computing paradigms provide an agile support for building and delivering robust enterprise information systems, and more generally for delivering applications and environments that target the general public. If the Web 2.0 allowed a wider data sharing, the transition to « services 3.0 » logic involves not only the sharing of data and applications alike, but also the consideration of many requirements relative to service quality QoS, service optimization, and security.

The SOC research team wishes to reinforce the theme of the design and the deployment of service oriented architectures in cloud environments while considering the constraints of service quality, optimization and security of both data and services throughout their entire life cycles. The objective is to extend the XaaS models to interweave the business and data visions and to ensure the respect of the security requirements throughout the application life cycle.
LIRIS (Laboratoire d’InfoRmatique en Image et Systèmes d’information) is a research center on Information Science and Technology. LIRIS is affiliated to CNRS (Centre National de Recherche Scientifique) under the label UMR 5205. The laboratory involves 320 researchers from INSA de Lyon, Université Claude Bernard Lyon 1, Ecole Centrale de Lyon, Université Lumière Lyon 2 and CNRS. It is organized in six areas of skills of 20-25 permanents. Each of the 12 research teams belongs to one of these areas:

- **Computer Vision and Pattern Recognition** (IMAGINE and M2DISCO research teams): automatically understanding multimedia data (images, video, digital documents, 3D scenes): acquisition/reconstruction, indexing, modeling, classification or automatic content recognition (objects, actions, concepts ). Skills: signal and image processing (filtering, segmentation, feature extraction), machine learning and pattern recognition (connectionist, statistical and structural approaches), information fusion, constraint programming, discrete and continuous optimization

- **Geometry and modeling** (GEOMOD and M2DISCO research teams): computational geometry, discrete geometry, geometric and topological modeling, 3D reconstruction and interactive creation, procedural modeling, geometry processing of meshes and discrete shapes (feature extraction, indexing and retrieval, compression, watermarking, segmentation, visualization), topological modeling

- **Data Science** (BD, DM2L and GRAMA research teams): to provide adequate answers to the explosive deluge of digital data, this research group aims to promote fertilization between different complementary areas of computer sciences related to data modeling, algorithmic, graph theory and combinatorics, data mining and statistical learning or languages and systems for databases.

- **Services, Distributed Systems, and Security** (DRIM and SOC research teams): proliferation, discovery and composition of software and data services deployed over the Internet, quality of service and fault tolerance, security, trust, reputation, content adaptation and personalization, reliable information sharing and dissemination

- **Simulation, virtuality, and computational sciences** (BEAGLE, R3AM and SAARA research teams): this research group aims to acquire, understand, model, simulate and render our environment from the realistic simulation to mathematical modeling continuum. Along the real-virtual continuum, the following skills are acquisition / modeling / interpretation / rendering of scenes, animation, computational biology, artificial evolution, multi-scale models, perception models, reaction / diffusion models in particle systems, augmented reality, computer graphics, artificial life. On the methods plan, the following skills are present: intensive and parallel computing, scientific computing, stochastic methods, self-centered modeling, computer vision, bio-mechanical simulation, multi-physics simulation

- **Interactions and cognition** (GRAMA and SILEX research teams): this research group analyses, designs and develops dynamic digital systems in which agents (human or software systems) interact. The researchers focus both on individual properties of agents, and on properties of the system as a whole. In particular, they are interested in the cognitive abilities of those systems. Skills: knowledge dynamics and traced experience, Computer Environment for Human Learning, interactive systems, multi-agents systems

The laboratory leads research on fundamental issues in these six areas. It also develops know-how with strong impacts on society and closely with the other scientific disciplines (engineering, Humanities and Social Sciences, Environmental Sciences and Life Sciences):

- **Culture and heritage** (digital libraries, critical edition, digitization of ancient documents, archiving, 3D virtual museums …)

- **Environment et urban world**: intelligent building, 3D modeling of the cities, Geographical Information Systems, mobility, transport optimization

- **Biology and health** (data mining, complex systems modeling and analysis, e-health…)

- **Ambient intelligence** (pervasive systems, sensor networks, intelligent video surveillance, secured communicating objects…)

- **Human learning** (personalization, cognitive assistance, collaborative learning…)

- **Digital entertainment** (video games, animated cinema, multimedia data processing…)

- **Big data management**, processing, visualization