

Researcher in Architecture and Urbanism

“Characterization and Specification of end-user energy services”

Grenoble Alps University, France

The Grenoble Alpes University offers a position of Research Engineer within the scope of its *Cross-Disciplinary Program [Eco-SESA](#) “Eco-district: Safe, Efficient, Sustainable and Accessible Energies”*.

Endowed with 8 M€ - 1.7 M€ funded by the “Investing for the Future” governmental program - the [IDEX](#) cross-disciplinary program Eco-SESA assumes that the stochastic production from the renewable energy sources in urban areas challenges the historical - centralized and unidirectional - operation mode of the grids and the relationship of individuals and communities to energy. Based on observations at the building and district scales, the project Eco-SESA aims to produce knowledge, concepts, tools and methods to re-think planning, design, management and governance of energy systems in cities as well as the design of their components.

Grenoble is the [second French research and innovation site](#) after Paris and comes out as [the best place in France](#) to study.

Problematic & Context:

The work will be conducted in the context of Research Fronts 1 and 2 of the Eco-SESA project. Eco-SESA (Safe, Efficient, Sustainable and Accessible Energy) is a four years cross-disciplinary research program funded by Univ. of Grenoble Alps. The objective of the project is to radically improve the scientific, technical, and methodological knowledge in the area of sustainable energy.

Research Front 1 (FR1) focuses on the development of an interactive e-coach energy management system. This e-coach will provide inhabitants of smart buildings with explanations and recommendations enabling them to reconcile their individual needs and preferences with the larger goal of sustainable use of energy. While FR1 is concerned with the individual level, Research Front 2 (FR2) studies emerging behaviour at the community level.

Mission:

- Characterisation of the different types of energy end-users, their values, their expectations in terms of comfort and energy expenses for occupants located in LNCMI, GREENER and in different flats in the scientific presqu'île of Grenoble
- Characterisation of the sociological and economical collective decision mechanisms related to energy, taking into account the different scales: flat/office/room, building, district and grid
- Specification of helpful interactive services that might help the different types of energy end users
- Development of requirements specification for the interactive capabilities and the graphic user interfaces for the energy management systems

Host Laboratory and researcher: Cresson, UMR CNRS-MCC 1563 « Ambiances Architectures Urbanities » <http://aau.archi.fr> +33(0)4 76 69 83 36 / Nicolas Tixier

Fieldworks: Households selected by ECO-SESA

Proposed methods and work:

- Build a transect with different mediums (drawing, photo, text, video, measure, etc.). Technical representation as much as field practice, the transect is revisited today. For this research, it is a hybrid device between a technical section and a sensible journey: it is built by drawings, measures, photographs, texts, interviews or videos, as far as it is practiced in situ by perceiving, commenting, wandering, while walking. By rehabilitating de facto the atmospheric dimension in urban representation, and by allowing the inscription of residents stories into specialized interdisciplinary debates, the transect becomes a tool for questioning and expressing the sensory space and users practices.
- "Semi-directive" interviews, diary of the practices, study of urban planning and the technical devices will aim at identifying the comfort in the selected district. These surveys will target the different spaces crossed by the urban transect (housing and tertiary public place, private space, building)

Expected results: specification of requirements for innovative interactive services

For more information: Tixier Nicolas, Professor

Competence and profile required:

- Urban and architectural diagnosis
- Graphic and videographic representations
- Sensitive culture and ethnography of public and private space
- Qualitative in situ methodologies: urban transect, field survey or semi-directive interview
- Fluent in English and in French speaking

Profile: We are looking for a highly motivated researcher engineer who is interested to work in an interdisciplinary project. The main scientific core would be: architecture and urban ambiances. Interpersonal skills, dynamism, rigor and teamwork abilities will be appreciated.

Keywords: architecture, urban design, ambiances, sensory culture, comfort, representation.

Collaborations & international opportunities:

In a context of energy transition:

- Produce interdisciplinary experiments between researchers, operators and users.
- Produce shareable representations of the spatial, social and sensory characteristics, both for the energy and for the comfort.
- Establish recommendations for the design and the operation of tertiary buildings or / and in the innovative housing.

Starting date and duration of the mission: 01/09/2017 / 12 months

Salary: According to French regulations for Research Engineer

Submission deadline: June 1 2017

Application procedures:

- **by email at:** nicolas.tixier@grenoble.archi.fr and apply.eco-sesa@univ-grenoble-alpes.fr
- **by form:** <https://ecosesa.univ-grenoble-alpes.fr/job-offers/application-form-711620.htm>

**Both application procedures, email and form, are mandatory.
Each application procedure must include a single attached file (.zip, .rar, .pdf)**

Your application must include (Applications may be submitted in French):

- CV including a list of publications
- Cover letter
- Examples of past works