SCHOOL OF ARCHITECTURE, CIVIL & ENVIRONMENTAL ENGINEERING, ENAC
Environmental Engineering Institute, IIE
Laboratory for Human-Environment Relations in Urban Systems, HERUS
Swiss Mobiliar Chair in Urban Ecology and Sustainable Living

100% Post-doc Position on Dynamics of Urban Metabolism

We are offering a 100% Post-doc (if applicable) senior scientist position on Dynamics of Urban Metabolism at the Laboratory for Human-Environment Relations in Urban Systems (HERUS), ENAC, at the Swiss Federal Institute of Technology (EPFL) in Lausanne, Switzerland.

Currently, more that 50 % of the world's population lives in cities, and this share is expected to keep increasing, posing growing challenges for sustainable development. Although cities only cover 3 % of the earth's surface, they account for 75 % of global CO2 emissions, consume about 75 % of resources and produce 50 % of the waste worldwide. However, cities also provide income (80 % of global GDP) and education, and are hotspots for innovation. The ambiguous role of cities poses large challenges and opportunities and renders it necessary to develop tools to assess urban strategies and developments from a sustainability perspective.

The HERUS Laboratory focuses on the transition of urban systems towards sustainability. Thereby, we pursue an interdisciplinary approach, bringing together scholars from social-, natural- and technology oriented sciences. The future post-doc will build on and further develop the area of Urban Metabolism e.g., energy and material flows and their determinants, circular economy, as a key component of sustainable urban systems. He/she will adopt a dynamic perspective, bringing short- and long-term aspects affecting the urban metabolism.

Your job

- Responsibility of research on long term (e.g., infrastructure, buildings) and short term (e.g., yearly energy and material, waste flows) aspects of urban metabolism
- Research in collaboration with the HERUS team, ENAC faculty and city partners
- Link to international initiatives in Urban Metabolism
- Support PhD students and MSC students in urban metabolism and circular economy
- Teaching in material flow analysis, systems analysis and/or LCA

We expect

- Excellent PhD degree, preferably in Environmental Engineering, Industrial Ecology, Architecture or Geography
- High interest in dynamics in urban metabolism
- A strong methodological background in GIS and material flow analysis modelling
- Interest and commitment to interdisciplinary research
- Proficiency in English, strong team spirit, social skills, independence and a high level of motivation for academic research work motivated by relevant practical problems
- Experience in proposal writing and teaching
- French knowledge is an asset

We offer

- Excellent working conditions: an innovative and competitive atmosphere, modern equipped working areas and an environment that promotes access to the world's best scientists
- Great interdisciplinary team spirit
- Full financial support including conference visits
- Contract of 1 year, renewable, maximum 6 years
- The position is open as of **February 2020** or upon agreement

Please send your motivation letter, curriculum vitae including your list of publications and two references by December 1st in one PDF to caroline.buehler@epfl.ch.