

The **Aerothermochemistry and Combustion Systems Laboratory (LAV)** at the Institute of Energy Technology (IET) within the Department of Mechanical and Process Engineering (D-MAVT) at ETH Zurich invites applications for a

PostDoc Position in Energy & Mobility Research

Who we are: The “Energy Systems Group” is part of LAV, the lab of Prof. Boulouchos. Our core research question, boiled down to one sentence, is how the decarbonisation of mobility changes the way we provide and consume energy. Through a set of interrelated research projects, we are building an energy systemic model of the Swiss transport system: it describes the demand for mobility and covers the complete energy conversion chain, from the wheel (or propeller) up to the primary energy source(s). We target research questions such as the need for fast charging, the impact of smart charging on electricity imports, and the role of power-to-gas.

What to expect: Primarily, you will collaborate with members of our group on individual research projects resp. research questions. Your role is to drive publication (on your own account and in support of doctoral students), to coordinate our activities within the [SCCER joint activity CEDA](#) and to further the general model development. In particular, we wish to strengthen our micro-economic perspective (from estimating the costs of the transformation to formulating strategies / business plans for energy / mobility service providers), and possibly include macro-economic aspects (price mechanisms). Furthermore, you will represent the group at conferences and meetings, assist with the coordination of the group and its activities, support the lab as teaching assistant for associated courses and supervise student projects.

What we offer: A full-time PostDoc position at ETH Zurich. The original intellectual challenge of tackling the overwhelming systemic complexity of sector coupling (of mobility and other energy sectors) in a meaningful way, having a scientific impact (publishable, original insight) and supporting decision makers at various levels. You will become an integral part of a young and dynamic research team; we believe in participation, creativity and personal growth. We are well connected in the Swiss energy research community, most prominently through the SCCER mobility (headed by Prof. Boulouchos); our strong suit are data: we have access to many relevant governmental, public and private datasets, as well as the expertise and IT infrastructure to operationalise them.

Who we are looking for: You hold a PhD in a related topic (engineering, energy-economics, environmental sciences, physics, ...); you enjoy working in a team and discussing results and approaches (not just your own) with others and you have good communicational and organizational skills. You are an experienced modeller, know how to handle big datasets, are not afraid to explore new techniques and tools and have a firm grasp of energy systems and their relevant technologies. You are fluent in English, both spoken and written, and you can start before March 2018. Ideally, but not necessarily you are fluent in German, both spoken and written and are an experienced programmer (you care about things such as coding style and software architecture), preferably in Python, have experience with machine learning, optimization and high performance computing. You have a background in energy macroeconomics and/or microeconomics / management (electricity markets, consumer behaviour, business plans, investment behaviour, ...) and you can start right away.

We look forward to receiving your online application including a max. 2 A4 pages motivation letter detailing your research interest(s), your CV and a recent publication of your PhD thesis. Please note that we exclusively accept applications submitted through our online application portal. Applications via email or postal services will not be considered.

For further information about the group please visit our website <http://www.lav.ethz.ch/research/energy-systems-group.html>. Questions regarding the position should be directed to Dr. G. Georges, Head of the ETHZ-LAV Energy Systems Group, by email georges@lav.mavt.ethz.ch (no applications) or phone +41 (0)44 632 06 85.



Apply now

