

Job title	PhD position
Job type (PhD, Post-doc, Engineer)	PhD
Contract duration (months)	36
Qualifications (Master degree, PhD...)	Master degree
Job hours (full time/ part time)	Full time
Employer	UBFC – Université de Franche-Comté
Host Laboratory	FEMTO-ST
URL Host Laboratory	www.femto-st.fr
Address Host Laboratory	FEMTO-ST – Energy Department – 2 avenue Jean Moulin – 90000 BELFORT - FRANCE
Job description	<p>The PhD studies will explore the use of hydrogen energy in new buildings with low greenhouse gas emissions during their life cycle.</p> <p>As the use of concrete is reduced to mitigate CO2 emissions, building inertia is likely to decrease and make the buildings prone to present high indoor temperatures in summer heat waves. Therefore, renewable cold production is of highly importance and hydrogen energy technologies could provide a way to ensure the thermal comfort of building occupants without contributing to global warming.</p> <p>The proposed studies are simulation studies. Based on a few key figures defining the performance of building (consumption, thermal capacity, time constant, ..), the performance of different ventilation, air conditioning or heating systems associated with different technologies of electrolyzer, fuel cell and their storage will be evaluated. Optimization methods will be used to determine the different favorable application cases in terms of energy and exergy.</p>
Supervisor(s)	<p>BEGOT Sylvie (sylvie.begot@univ-fcomte.fr)</p> <p>GUSTIN Frédéric (frederic.gustin@univ-fcomte.fr)</p> <p>LEPILLER Valérie (valerie.lepiller@univ-fcomte.fr)</p>

Candidate profile	The candidate should have a Master degree in thermal or energy engineering. Programming skills in Matlab or equivalent are mandatory. Knowledge in building energetics and fuel cells or hydrogen energy is very welcomed.
Keywords	Building energetics ; hydrogen energy ; simulation
Application deadline	May, 15
Starting Job	October 1 st 2021
Application	<p>PhD Position</p> <p>Please send the following documents (all in one PDF file) by e-mail to "indicate contact email" :</p> <ol style="list-style-type: none"> 1) For EU candidates: Copy of your national ID card or of your passport page where your photo is printed. For non-EU candidates: Copy of your passport page where your photo is printed. 2) Curriculum Vitae (1 page). 3) Letter of motivation relatively to the position (1 page). 4) Copy of your Master degree and/or Engineer degree if already available. 5) Copy of your final marks and ranks. 6) Coordinates of reference persons (maximum 3, at least your master thesis supervisor): Title, Name, organization, e-mail. <p>If you have questions regarding the application, please contact the supervisors.</p>