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Dear EMS members,

I want to express my gratitude for your support through my enrollment in the Urban Climate Summer School organized by the Ruhr University Bochum (BUCSS). As a PhD student focused on the energy characterization of urban environments, the innovative techniques shown to quantify the urban microclimate have been an inspiration to implement them in the energy simulation models which I am working on.

During these years I have developed a systematic methodology to identify representative Homogenous Urban Zones (HUZs) to ease the evaluation of building energy consumption and thermal comfort in cities. I believe that this method, carried out between the Universidad Politécnica de Madrid (UPM) and CIEMAT, could boost more accurate energy models in cities that take into consideration the urban microclimate under the current climate change trends. Because of this, the topics addressed in the BUCSS motivated and sparked me to guide my doctoral studies. The program included the presentation of different urban climate informatics approaches that entail the use of remote sensing images, crowd-sourcing data (including wearables and weather stations managed by citizens), cutting-edge sensors, the platform Google Earth Engine and modelling software like PALM or WRF, among others.

In addition, these sessions, imparted to well-known experts in the topic, included firstly a state of art lectures that finished with a hands-on class. I found very helpful this theoretical and practical structure combination to completely understand and practice the subject matter, which was evident in the final exercise student presentations. On the other hand, I consider this experience as a great opportunity to know personally the most relevant members, teams, organizations and researchers that are working on urban climate studies. I also found it very attractive to know and share experiences with other participants. The proposed technical discussions originated during the program, but also the conversations during the social events, were, in my opinion, an excellent chance to know more in detail about both lecturers and student projects and interests, that could be the foundation of future collaborations.

Indeed, as a result of these conversations and the research studies presented in the summer school, I proposed a potential study between the Ruhr University Bochum and the CIEMAT. The idea behind it is to use the WRF software in the already identified HUZs in the city of Madrid to quantify the influence of urban aspects on the energy and thermal comfort impacts. This combination of tools to deeply analyze built environments could ease the strategies' design to face climate change risks exacerbated by the urban climate effect. Moreover, this proposal will strengthen the urban climate network between both institutions.

Finally, I want to highlight the effort of all the organizers and partners to back up this inspirational urban climate summer school.

Thank you for your time and consideration.

Yours faithfully,

Helena López Moreno