



AQUACOSM SUMMER SCHOOL 2019 Imperial College London

Imperial College
London

Freshwater mesocosms as tools for gauging ecological consequences of climatic and chemical change

- Location: Silwood Park Campus, Imperial College London, Ascot, UK
- Dates 30th June - 13th July 2019
- Local organisers: Dr Catalina Estrada, Prof. Guy Woodward, Dr Michelle Jackson and Dr Emma Ransome
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Rationale and theme

Mesocosms are becoming increasingly central to a range of ecological disciplines, but in particular for studying the effects of climate change and pollution, which are challenging to measure in natural systems. This summer school combines these two major research areas, and the on-the-ground practical work will introduce you to some of the largest field experiments currently underway to examine not just one, but both of these stressors. Importantly, mesocosms often provide the only way to deal with multiple stressor effects in a statistically robust way that enables their combined (and potentially synergistic) effects to be disentangled with how they operate in isolation.

Our understanding of such interactions is limited, with the outcomes often being described as “ecological surprises” due to the counterintuitive effects stressors may have on one another, as well as the indirect effects that can ripple through the food web. This summer school focuses on how we can use mesocosms as ideal tools to address this huge knowledge gap and you will receive training in state-of-the-art techniques in statistical analysis, experimental design, field sampling techniques and

the associated theoretical underpinning, as well as a more practical focus on the logistics of setting up and running the necessary infrastructure for such experiments.

The summer school is part of the European Commission funded project AQUACOSM: Network of Leading European AQUATIC MesoCOSM Facilities Connecting Mountains to Oceans from the Arctic to the Mediterranean, which also provides transnational access opportunities to mesocosm facilities in 19 countries. Read more about the project [here](#).

We have a wide range of expertise on site who will teach you during the summer school, as well as eminent world experts as guest lecturers. Wherever possible we will connect the teaching to live research, with training provided in core techniques that span multiple organisational levels – from genes to ecosystems – and domains of life – from microbes to vertebrates. We will also link structure to function across scales and levels, and we will also place the fundamental science within the wider policy and regulatory context. One of the week's exercises will involve assembling this knowledge into your own research grant bid during the school. We will also have guest speakers from affiliated research facilities, including Dr Miguel Matias, who can provide a more international perspective to these approaches and to compare/contrast with our set-up in the UK. This school is aimed primarily at training early-career researchers and as such there are bursaries (accommodation, subsistence and travel) attached to support attendance. A detailed programme will be circulated to the successful applicants.

Application process:

- Accommodation will be provided on site and the course will be taught in our labs, lectures rooms and field sites. Meals will be provided on site or in a nearby restaurant
- Travel will be reimbursed to a maximum of £500 pp
- Applicants can be PhD students or within 6 years of completing their PhD. There are 16 places in total
- To apply, please email your CV and a statement (<300 words) of how the school will benefit your research to: training@aquacosm.eu
- DEADLINE: 12th April 2019
- NOTES: Members of the AQUACOSM consortium/partners and present members of their department cannot apply. Priority will be given to applicants who have not previously used our mesocosms, and who are located in countries where no equivalent research infrastructure exists. All nationalities are welcome to apply, as the Summer School can welcome up to 20% of the funded participants from countries outside the European Union and associated states.

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