Course: Integrating physiology from individuals to ecosystems, and applications under climate change scenarios

In this course I will introduce central concepts of ecological unification, particularly how one can use physiology and theory to integrate ecological processes from individuals to ecosystems. In doing so, we will uncover the power of simple and elegant mechanisms to explain complex ecological phenomena across scales of biological organisation. Morning lectures will be followed by afternoon practicals in R. I will focus primarily on Metabolic Theory of Ecology as a framework of study, and will draw examples from recent literature including my own papers, which are primarily focused on fishes and coral reefs. As much as possible, we should also discuss how such approaches can be a powerful tool for biological conservation.

Professor visitante Dr. Diego Barneche Rosado, University of Exeter, UK.

Diego completed his PhD in the Quantitative Ecology & Evolution Group at Macquarie University in 2015. He is currently a Lecturer in Marine Ecology at the University of Exeter in the UK. Diego is passionate about making better use of mathematical, statistical and computational tools to develop predictive ecological theories, models and empirical tests. He is currently interested in explaining mechanistically how individual-level determinants of metabolism as well as life-history traits affect the energy flux and overall productivity of populations, communities and ecosystems across the world’s aquatic ecosystems.

Informações: http://poseco.ufsc.br,