

UNIVERSITE LYON 1 (Claude Bernard)		Renouvellement
Corps : Article : Chaire : Section n° 1 : Section n° 2 : Profil synthétique:	<p style="color: red;">MCU</p> <p style="color: red;">NON</p> <p style="color: red;">67</p> <p style="color: red;">Quantitative modelling for predictive purposes, ecotoxicology</p>	
Composante de rattachement enseignement	FST – Département de Biologie	
Laboratoire d'accueil :	LBBE – UMR CNRS 5558	

Quantitative modelling for predictive purposes, ecotoxicology

TEACHING:

Interdisciplinarity will be the core teaching activity of the candidate. His(her) mission will consist in helping students to build integrated skills in mathematics as tools to answer biological issues, and to positively view formal disciplines on a long-term basis. The candidate will teach mathematical biology, statistics and modelling courses for students in Biology, Mathematics and Computer Science training:

- in Bachelor's degrees: Life and Earth Sciences (L1), Mathematics and Computer Sciences for Life Sciences (L3 MIV), Basic Biology (L3 – UCBL/ENS);
- in Master's degrees (M1+M2): field "Ecosciences, Microbiology", special field "Mathematics and Computer Sciences for Life Sciences" (MIV); field "Biosciences" (PRES master).

RESEARCH:

Where experimentation turns out often to be impossible or too costly, *in silico* approaches using mathematical modelling, statistics and computer science appear relevant to understanding and acting. Quantitative risk assessment on the long-term functioning of ecosystems, when exposed to chemicals, comes up now against theoretical and methodological barriers. A massive effort is required in particular to address the necessary shift from the individual to the population and to the community through the development of mathematical and statistical models, designed to be predictive. Such an approach is clearly interdisciplinary; it aims at better understanding the mode of action of contaminants on individual life history traits and the subsequent effects at population and community levels. The candidate will be hosted within the team "Predictive Modelling and Ecotoxicology" (MEPS) of LBBE (A+, AERES), which is supported by IUF (2011/16). It will contribute to the methodological axis of the UMR and will collaborate on projects within the framework of the research platform ROVALTAIN.

CONTACTS

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