Participants of the DEB tele course 2017

updated 2017/03/08

Adrian Gleiss
90 South Street
Murdoch
Australia
adrian.gleiss@gmail.com

Undergraduate degree in Marine Biology. PhD Marine Biology

Physiological and Behavioural ecology of fishes. Especially interested in linking organismal performance to environmental conditions in order to predict how natural system respond to change.

– mark
– certificate
– practical course
– symposium

Adriana Sardi
Hansmarkvegen 46
Troms
Norway
adrianasardi@gmail.com

fitting of survival data using GUTS, basic coding in Matlab and good knowledge of R

In overall, to understand the effects of pollutants in marine benthic organism (in a non species-specific way). I consider there is great potential in evaluating ecological interactions and multiple abiotic variables together with ecotoxicological data derived from process-based models as DEBtox.

+ mark
+ certificate
– practical course
– symposium

Afef Boussadia
Tunisia
Sousse
Tunisia
a.boussadia@campus.unimib.it

Fishery engineer, (aquaculture) Master of production and aquatic ecosystem

Growth models response to temperature response to feed model adaptation

+	mark
+	certificate
−	practical course
−	symposium

Amani Doghri

Tunis Belle vue
Tunisia
amani.doghri@gmail.com

national engineering diploma in food industry and agronomy Biopolymer extraction from plants and animals Detoxification from the body Neutraceutical production Statistics Aromatherapy

−	mark
+	certificate
−	practical course
−	symposium

Amina Bouslama
3 Place Pasteur, BP. 74
Tunis
Tunisia
aminabousslama@gmail.com

Biology Industrial Engineer

Bioinformatics , Biomathematics

– mark
+ certificate
– practical course
– symposium

ANA ISABEL CATARINO
RICCARTON CAMPUS
EDINBURGH
EH14 4AS EDINBURGH
UK
a.catarino@hw.ac.uk

Marine biologist (graduation Lisbon, Portugal), ecotoxicologist, physiologist, ecologist (PhD Brussels, Belgium)

My main research interests are focused on the anthropogenic impacts on marine organisms. I've studied ocean acidification effects in the metabolism and biomineralization of sea urchins and starfish and right now I'm working on micro- and nanoplastic impacts on fish and mussels, as well as on their associated co-contaminants.

– mark
– certificate
– practical course
– symposium

Andre Gergs
Kackerstrasse 10
Aachen
Germany
gergs@gaiac.rwth-aachen.de

Biology, ecology, ecotoxicology, animal physiology, molecular plant pathology

Population biology, community ecology, predator-prey interactions, multiple stressors, individual based modelling, toxicokinetics and toxicodynamics

– mark
– certificate
\+ practical course
– symposium

ANDREA CAMPOS-CANDELA
C/ Miquel Marqus, 21
ESPORLES
Spain
andreacamposcandela@gmail.com

PhD in Marine Sciencies and Applied Biology (2014-currently).

The aim of my PhD project is to explore whether there are differences in the transference processes of mass and energy depending on the vulnerability degree of a given fish, by disentangling the mechanistic relationships among (1) behavior/activity pattern, (2) food assimilation rate, (3) growth and (4) reproductive potential.

– mark
\+ certificate
\+ practical course
– symposium

Angie Peace
3716 43rd St.
Lubbock
USA
a.peace@ttu.edu

Applied mathematics, dynamical systems

My research in Mathematical Biology provides quantitative and qualitative improvements in the predictive power of theoretical and computational population ecology. I use dynamical systems theory and tools to develop, analyze, and interpret mathematical models of biological systems, spanning the fields of ecology, toxicology, and epidemiology.

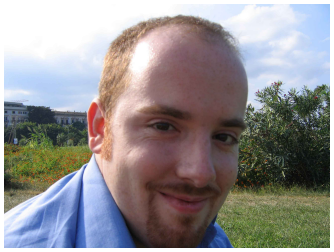
– mark
– certificate
– practical course
– symposium

Anna Carter
2200 Osborne Dr., Bessey 251
IA Ames
USA
acarter1@iastate.edu

microclimate modelling, statistical programming, GIS remote sensing, thermal biology

My research focuses on mechanistic constraints on species distributions, with an emphasis on predicting the consequences of climate and land-cover change. Currently, I am examining the intersections of environmental variation and evolutionary adaptation to identify mechanisms by which thermally-mediated traits in reptiles can respond to broad-scale environmental variation.

– mark
+ certificate
– practical course
– symposium

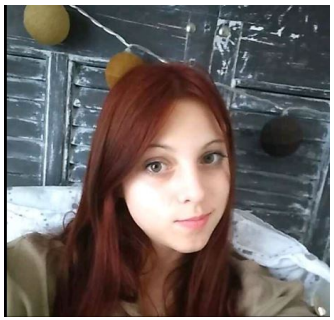


Antonio Giacoletti
via sampolo 48
Palermo
Italy
anto.giacoletti@gmail.com

Marine Ecology, Functional Ecology, Climate Changes, Multiple Stressor, Bioenergetics, Aquaculture

My actual interests are about the effect of multiple stressors on intertidal and subtidal organisms, with a particular focus on the effects of microplastics on the energetic budget of marine organisms. I'm currently studying how those pollutants may interact with current climate change events and affect organisms.

\+ mark
\+ certificate
\+ practical course
− symposium



Audrey Souloumiac
129 ancien chemin de toulon
Signes
France
audrey.souloumiac@hotmail.fr

I use DEB model for my M2 intership Within the MIO with Leo Berlin.

Research on Pelagia noctiluca with Leo Berline for modelling the dynamic of these species in the Mediterranean sea.

− mark
\+ certificate
− practical course
− symposium

Bas Kooijman
Donklaan 5
2254AA Voorschoten
Netherlands
bas.kooijman@vu.nl

Theoretical Biology, mathematics

Dynamic Energy Budget theory

− mark
− certificate
+ practical course
− symposium

Bob Kooi
de Boelelaan 1085
1081HV Amsterdam
Netherlands
bob.kooi@vu.nl

researcher Theoretical Biology VU-Amsterdam

Link between DEB-individual model and population and ecosystem models

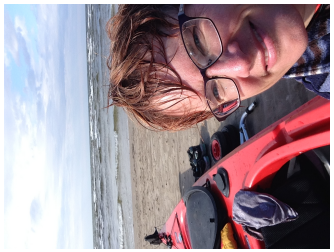
− mark
− certificate
+ practical course
− symposium

Bonface Manono
POST Box 170
Kitui
Kenya
bmanono@seku.ac.ke

I am an ecologist with a background in biology and environmental science. I have an interest in pursuing ecological modelling course. I view this training as a step cto take this further.

My research interests are in waste management, agriculture and food with a passion in the promotion of sound environmental management and policy formation in a way that is inclusive with the bottom up solutions to land and natural resource challenges.

+	mark
+	certificate
−	practical course
−	symposium



Brbel Mller-Karulis
Baltic Sea Centre, Stockholm University
Stockholm
Sweden
barbel.muller-karulis@su.se

Environmental science, research in marine biogeochemical and foodweb modelling

I would like to couple a foodweb model for the Baltic Sea (Tomzcack et al. 2012) to the BALTSEM (Gustafsson 2012) biogeochemical model. Therefore I am interested in DEB as a tool to link predation by higher trophic levels (zooplankton, planktivorous and benthivorous fish) to their growth, carbon, nitrogen and phosphorus turnover.
I am intersted in the tele course and perhaps also the research school.

−	mark
+	certificate
−	practical course
−	symposium

Carlos Teixeira
Av. Rovisco Pais, 1
1049-001 Lisboa
Portugal
carlos.teixeira@tecnico.ulisboa.pt

Conservation Biology; Environmental Engineering; Molecular Genetics; Ethology

My main interests are the life history evolution and conservation of biodiversity in general. For DEB theory application purposes I chose to focus on modern birds (Neornithes) as my study group, looking at individual species and general patterns of metabolic performance. I am also interested in contributing towards science-based policy development.

− mark
− certificate
− practical course
\+ symposium

Carmen Gonzalez
Rue Dumont d'Urville
Plouzane
France
carmen.gonzalezfernandez@univ-brest.fr

PhD in marine toxicology

My expertise covers the study of physiology and toxicology of marine animals, specially the invertebrates. Nowadays im working in the interaction of several factors considering as confounding factors as temperature, nutrition, reproduction, etc... with pollutants to assess the combine effect of both.

\+ mark
\+ certificate
− practical course
− symposium

Catalina Chaparro Pedraza
Science Park 904, builiding C
1098XH Amsterdam
Netherlands
p.c.chaparropedraza@uva.nl

Biologist and engineer, postgraduate formation (MSc and PhD) in theoretical biology

The dynamics arising at the population and community level from the interaction of individuals and its behavior. I am currently studying the migratory phenomenon in fishes and its consequences at the population level based on assumptions of the individual energetic dynamics.

−	mark
−	certificate
+	practical course
−	symposium

Charlne GUILLAUMOT
Laboratoire de biologie marine, Avenue F.D Roosevelt, 50
CP 160/15 1050 BRUXELLES
Belgium
charleneguillaumot21@gmail.com

DEB summer school on August 2016 Help of Antonio Aguera (post doc) to learn DEB

DEB and Trait Distribution Model on Antarctic species (molluscs, echinoderms, fish?) combined with Species Distribution Models and habitat mapping in Western Antarctic Peninsula

+	mark
+	certificate
−	practical course
+	symposium

Cheryl Murphy
15860 Short Street
East Lansing
USA
camurphy@msu.edu

individual based modeling, ordinary differential equation modeling, population modeling, adverse outcome pathway

I am interested in linking subcellular processes to whole organismal processes to scale to population level effects. I have worked extensively in the adverse outcome pathway framework and with individual based models. I would like to learn DEB to help bridge these two areas.

− mark
\+ certificate
\+ practical course
− symposium

CHIARA ACCOLLA
Ecology Building, 1987 Upper Buford Circle
St. Paul
USA
chiara.accollav@gmail.com

Ph.D. in theoretical ecology, population dynamics, modeling at individual scale (IBM)

Development of mathematical tools that link responses at lower levels of biological organization to higher level responses. Ecotoxicology. Apply DEB theory in order to develop IBM about effects of chemical stressors, and infer results at population-ecosystem scales to inform ecological risk assessment. Consequences of chemical stressors on species interaction.

− mark
\+ certificate
\+ practical course
− symposium

Christina Wood
National Oceanography Centre, European Way
SO14 3ZH Southampton
UK
c.l.wood@soton.ac.uk

DEB - none MSci - Marine Biology: invertebrate reproduction and benthic ecology.

Marine benthic ecology:
- Using reproductive traits to assess response of benthic invertebrates to multiple stressors. - Species' adaptation to environmental change (acclimation through phenotypic plasticity vs. genetic adaptation) - Understanding intraspecific variability within and between populations.

−	mark
+	certificate
+	practical course
−	symposium

Christophe Eugne Menkes
BP A5
Noumea
New Caledonia
christophe.menkes@ird.fr

Physics, oceanography, meteorology.

My main current interests lie in the coupling between environment, climate for example to terrestrial and marine ecosystems. I work on the understanding of climate onto top marine predators (e.g tuna, seabirds), on ants, on vector-borne diseases such as Dengue fever in the tropics

−	mark
−	certificate
−	practical course
−	symposium

Claudia Lpez-Alfaro
751 GSB University of Alberta
T6G 2H1 Edmonton
Canada
lopez@ualberta.ca

PhD in Wildlife Ecology, MSc in Biology and Agricultural Engineer

My research and professional goals have been focused to understand wildlife-habitat relationships and predict how environmental changes affects individual fitness and thus population trends. To reach this goal I have built different simulation models to explore the mechanism underlying ecological processed.

– mark
+ certificate
+ practical course
– symposium

Cristin Monaco
P.O. Box 94
Grahamstown
South Africa
cristianmonaco@gmail.com

Ecology and physiology of marine intertidal animals

I hope to better understand and predict the impacts of climate change on species physiological and ecological performance. My work has focused on individual level processes, including behaviour and energy budgets. I am especially interested on how these processes can help anticipate the outcomes of ecological interactions between species under current and projected climate change scenarios.

– mark
– certificate
– practical course
– symposium

David Costalago
Valhallavgen 71
Stockholm
Sweden
nauplius97@gmail.com

Marine and estuarine ecology

Fish trophic ecology and the effects of climate change and fisheries. Interactions between fisheries and the ecosystem. Marine ecosystem modelling for fisheries management.

− mark
\+ certificate
\+ practical course
− symposium

Diane Nacci
27 Tarzwell Dr
Narragansett
USA
nacci.diane@epa.gov

fish developmental physiology, biochemistry, toxicology, evolutionary processes, population modeling

marine fish models to predict/assess ecophysiology/toxicology effects of human-mediated stressors including chemical pollutants

− mark
− certificate
− practical course
− symposium

Edgar Meza
Teofilo Catillo St. 526
Lima
Peru
meza.f.edgar@gmail.com

fisheries aquaculture, marine science, oceanography

I want to study the impact of climate change on pelagic fisheries. Focusing on peruvian anchovy and sardine.

+	mark
+	certificate
−	practical course
−	symposium

Elke Zimmer
Arheilger Weg 17
Rodorf
Germany
elke.zimmer@ibacon.com

Diploma Marine Environmental Science; PhD in Theoretical Biology

Effects of contaminants on organism physiology; patterns of effects related to chemical characteristics; multiple stress (contaminants and natural)

−	mark
−	certificate
+	practical course
−	symposium

Emna Soufi
43, Avenue Charles Nicolle
Tunis
Tunisia
esoufi@gmail.com

Engineer: fisheries sciences Master: Marine ecology ans ecosystems PhD: Marine Biotechnology and bioprocesses

Marine organisms ecophysiology: molluscans with economical interest

Marine ecology and habitat of species with halieutic interest.

Exotic species: ecobiology of the Pearl Oyster Pinctada radiata .

Marine biotechnology and bioprocesses: valorization marine molecules with biological activities, specially for antitumoral purposes. The valorization of the byssal threads of the Mediterranean Mussel Mytilus galloprovincialis.

\+ mark
\+ certificate
− practical course
− symposium

Eric Gangloff
251 Bessey Hall
Ames
USA
gangloff@iastate.edu

Measuring metabolic rates, metabolites, and hormones in vertebrate ectotherms

Interested in linking individual physiological measurements (metabolic rates, hormonal status, energy indicators, behavior) to energy budgets and then extending to population level models, especially in the context of shifting life-history strategies.

– mark
\+ certificate
– practical course
– symposium

Erik Muller
Dept EEMB
Santa Barbara
USA
bpbleus@yahoo.com

DEB

DEB

– mark
– certificate
– practical course
– symposium

Eve Mouret
Appartement 34 Neptune 3,
220 Avenue Jean Monet
Ste
France
eve.mouret@ifremer.fr

Licence Biologie Universite de Bordeaux Master Oceanographie Aix-Marseille Universite

I work at the "Laboratoire Environnement Ressource Languedoc-Roussillon" (Ste, France). My objective is to apply and adapt a DEB model of Crassostrea gigas in a context of sustainable exploitation in Thau lagoon (France)

- mark
- certificate
- practical course
- symposium

Ewaldo Leitao de Oliveira Jr
Cardeais St. 8000
59067-360 Natal
Brazil
ewaldoj@gmail.com

Ecology (in general - I have an Undergrad in Ecology), basic calculus (mathematics applied to biology), R programming

Trophic chain interactions in plankton ecological systems, especially eutrophic inland water bodies.

- mark
- certificate
- practical course
- symposium

Felix Massiot
350 commercial street
Portland
USA
fmassiotgranier@gmri.org

Marine ecology ,Fisheries sciences, population dynamic, bayesian statistics

I mainly work on the response of marine populations to climate change. My approach is mainly based on population dynamic models, and aims to explore changes in life history traits (maturation rate, migration ...), growth and natural mortality. I mostly work on fish especially Anadromous fish of the northern Atlantic Ocean.

− mark
− certificate
\+ practical course
− symposium

Flor Rhebergen
Uilenstede 58E
1183 AK Amstelveen
Netherlands
f.t.rhebergen@uva.nl

Evolutionary biology, behavioural ecology, population ecology

I am interested in the evolution of adaptive developmental plasticity. I investigate how development maximizes individual fitness, when individuals differ in energy acquisition. To that end, I study the evolution of male polyphenism in bulb mites, in which males may or may not invest in development of energetically expensive weaponry.

− mark
\+ certificate
\+ practical course
− symposium

Gisele Cavalcante Morais
Av. Beira-mar, s/n, Pontal do Sul
83255-976 Pontal do Paran
Brazil
gisellymorais@gmail.com

I have worked with benthic diversity responses to estuarine gradients, by using spatially and temporally nested sampling designs. Also, carrying out experimental analysis of process and environmental impacts assessment using marine benthic invertebrates as indicators of stress.

For now, I have interest in study ecophysiology of marine invertebrates on the basis of Dynamic Energy Budgets (DEB) theory.

−	mark
+	certificate
−	practical course
−	symposium

Gonalo Marques
Av. Rovisco Pais 1
1049-001 Lisboa
Portugal
goncalo.marques@tecnico.ulisboa.pt

University degree: Physics Engineering; PhD: Physics (High Energy); DEB course.

My main research interests are centered on the development of DEB theory integrating contributions from Organism Biology, Physiology and Thermodynamics, as well as Ecotoxicology. Two of the main points Im focusing now are: improving the parameter estimation process and making use of information of phylogenetically close species for parameter estimation.

− mark
− certificate
\+ practical course
− symposium

Grace DiRenzo
2135 Noble Hall
Santa Barbara
USA
graziella.direnzo@lifesci.ucsb.edu

PhD, University of Maryland, Dr. Karen Lips

I am primarily interested in understanding (1) how pathogen infection order affects pathogen interactions within a host and (2) the consequences of within-host pathogen interactions to pathogen transmission among hosts. I am interesting in applying DEB theory to my first objective.

− mark
\+ certificate
− practical course
− symposium

Helena Lopes Galasso
Chemin de Maguelone
Palavas les Flots
France
helenagalasso@gmail.com

MSc. Aquaculture Engineering. PhD student in Ecosystem and Agronomic Sciences.

I am interested in the application of energy budgets as interesting tools in the field of aquaculture, especially integrated systems with different trophic levels, to quantify biological process (growth, food uptake, reproduction, excretion) and predict the performance of each species in several contexts.

− mark
\+ certificate
− practical course
− symposium

Houria HANDJAR
city 64 bld Batiment 3 Karmane T
Tiaret
Algeria
handjarhouria@gmail.com

Biology Marine Science, fisheries science, ecology

I am interested by the effect of environment on stock abundance

− mark
\+ certificate
− practical course
− symposium

Ins Lopes
Avenida Rovisco Pais
1049-001 Lisboa Lisboa
Portugal
ines.estalagem.lopes@tecnico.ulisboa.pt

Master in Environmental Engineering from Tecnico Lisboa

Programming, mathematical modelling, DEB theory, aquaculture

+	mark
+	certificate
+	practical course
−	symposium

Irene Ballesta Artero
ruyterstraat 86
1792 AM Oudeschild
Netherlands
irene.ballesta.artero@nioz.nl

Marine Biology and Ecology

I started my PhD in March 2014 . I work at the Royal Netherlands Institute for Sea Research (NIOZ), situated on Texel, a small island in northern Holland. My project focuses on the understanding of the growth biology of Arctica islandica. I will study the timing of shell and tissue growth in relation to the key environmental factors through lab and field experiments (mostly at NIOZ and in northern Norway).

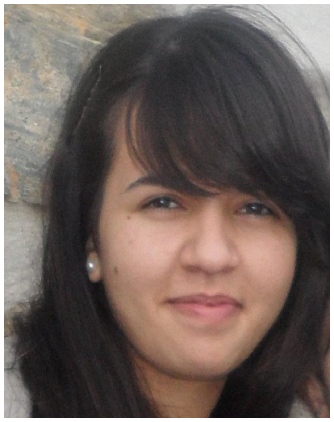
−	mark
+	certificate
+	practical course
−	symposium

Isabel Fuentes Santos
Eduardo Cabello n 5
Vigo
Spain
isafusa@iim.csic.es

Statistics

Statistical analysis of environmental problems. Currently working with the DEB model to predict the effect of climate change on mussel growth in the framework of the ClimeFISH project

− mark
+ certificate
− practical course
− symposium



Jessica Morais
Avenida Rovisco Pais,
1049-001 Lisbon
Portugal
jessica.morais@tecnico.ulisboa.pt

Master in Biomedical Engineering (FCT-UNL)

DEB Theory; Optimization/Mathematical Programming (Matlab); Derivative-free Optimization

+ mark
+ certificate
+ practical course
− symposium

Jaap van der Meer
PO Box 59
1790 AB Den Burg
Netherlands
jaap.van.der.meer@nioz.nl

Ecology Population ecology Behavioral ecology Statistics
Mathematical biology
Energetics and growth of marine organisms Population ecology of marine benthic invertebrates

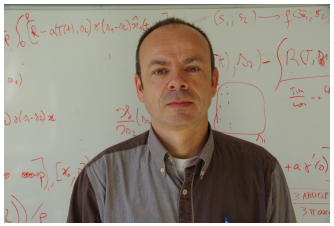
−	mark
−	certificate
+	practical course
−	symposium

Jacob Johansson
Dep. Biology, Slvegatan 37
SE-22362 Lund
Sweden
jacob.johansson@biol.lu.se

PhD Theoretical Ecology with experience in modeling ecological and evolutionary dynamics.

My research focuses on the seasonal timing of biological events (phenology) such as flowering, bird migration or insect pollinator emergence. Currently I investigate how population dynamics and phenological adaptation in pollinators depend on timing of resource peaks caused by mass-flowering crops, food shortage or episodes of pesticide exposure or infections.

−	mark
−	certificate
−	practical course
−	symposium

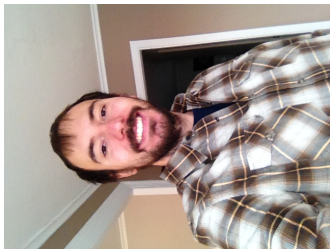


Jean-Christophe POGGIALE
MIO - OCEANOMED - Campus de Luminy
Marseille
France
jean-christophe.poggiale@univ-amu.fr

Mathematics : differential geometry and dynamical systems
Applications of mathematics to ecological problems (population dynamics, community ecology)

Ecosystems functionning in relation with biodiversity, responses of populations and communities to perturbations. Approach : mathematical models based on theoretical and mechanistical arguments; Biological systems theory.

−	mark
−	certificate
+	practical course
−	symposium

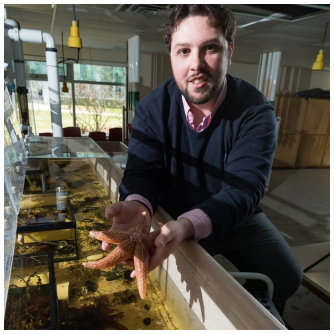


Jean-Pierre Desforges
Frederiksborgvej 399
Roskilde
Denmark
jpd@bios.au.dk

Wildlife and environmental toxicology, primarily molecular effects of contaminants

Investigating the effects of environmental contaminants on wildlife. I'm interested in all levels or biological organization, looking at effects on genetics, the immune and endocrine system up to the level of the population. Also trying to link biomarkers of effects to individual and population health.

−	mark
+	certificate
−	practical course
−	symposium



Jeff Clements
550 University Avenue
C1A 4P3 Charlottetown
Canada
jefferycclements@gmail.com

PhD in marine biology/ecology (global change biology)

Global change biology, marine biology, marine ecology, ocean acidification, ocean warming, hypoxia, animal behaviour, behavioural ecology, invertebrate biology, experimental biology

− mark
\+ certificate
− practical course
− symposium

Jessica Stubbs
(M092) 35 Stirling HWY
Crawley
Australia
jessica.stubbs@research.uwa.edu.au

Bachelor of Science (Honours) majoring in Zoology and Marine Science

I am interested in the biology and ecology of marine turtles. My PhD is focused on the foraging ecology and energetics of green turtles. I am hoping to use DEB theory to investigate the influence of food availability and temperature on different aspects of green turtle biology.

− mark
\+ certificate
\+ practical course
− symposium

Jessica Couture
Bren Hall, UC Santa Barbara
Santa Barbara
USA
jcouture@bren.ucsb.edu

Background in population modeling and ecology. Watched some Kooijman videos online.

Interested in a metabolic modeling and how that interacts with the ecosystem. Particularly working with ecotox in amphipods.

– mark
– certificate
– practical course
– symposium

Jimiao Chen
Room A315, College of Environmental Science Engineering, Nankai University, 38th Tongyan Road
Jinnan District, Tianjin
China
rossinho.c@gmail.com

Aquatic ecological criteria, field survey and ecotoxicology on plankton.

The stress-response relationship and ecological thresholds of aquatic ecosystem under major chemical stressors in different eco-regions, e.g. different watersheds among China, and based on which deriving and evaluating of ecological criteria and standards on aquatic ecosystems.

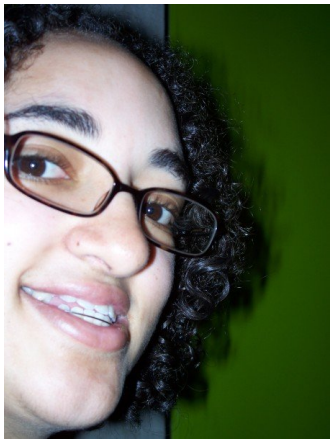
– mark
+ certificate
– practical course
– symposium

Joany Mario
Department of Biology, Memorial University
A1B 3X9 St. John's
Canada
joanyvalentina@gmail.com

Biologist focused on mathematical modeling and theoretical ecology.

The ecology and evolution of symbiotic interactions, particularly chemosymbiosis in bivalves in the family Thyasiridae. My study system is a complex of sympatric species that inhabit the fjords in western Newfoundland, Canada. The questions that I'm addressing through modeling link optimal foraging to population dynamics and evolutionary ecology.

\+ mark
\+ certificate
\+ practical course
− symposium

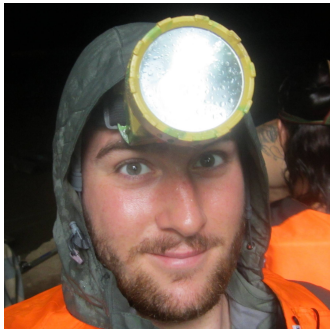


Jocylin Pierro
5817 22nd Street Apt 52T
Lubbock
USA
jocylin.d.pierro@ttu.edu

Environmental toxicology

Modeling effects of toxicants throughout a biological organisation.

\+ mark
\+ certificate
− practical course
− symposium



Jonathan Bepple
2412 Selkirk Drive
V1V 2R7 Kelowna
Canada
jbepple@gmail.com

BSc in ecology/evolutionary biology. MSc creating agent based models

Creating agent based models of natural systems. This course would be useful for more accurately portraying the biological actors within a simulation and their specific needs.

+	mark
+	certificate
−	practical course
−	symposium

Jorge Arturo Flores Valiente
Violetas 1009
Lima
Peru
jorgefloresvaliente@gmail.com

Ecological modeling, R, Matlab, DEB theory,

Small pelagic fishes, ROMS-ICHTHYOP-DEB, Ecosystem management, Larval transport, Climate change

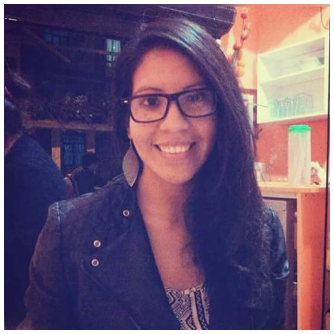
+	mark
+	certificate
−	practical course
−	symposium

Josef Koch
Campus Coupure, Building F - 2nd Floor, Coupure Links 653
Ghent
Belgium
josef.koch@ugent.be

MSc in Ecotoxicology; PhD student in environmental technology.

I am interested in individual-based population modeling as a tool in environmental risk assessment of chemicals. My special research focus is on copepods as aquatic test organisms. I work with the harpacticoid brackish water species Nitocra spinipes.

+	mark
+	certificate
+	practical course
−	symposium



Joselyn Marilyn Zavala Arellano
Avenue Progreso 300
Chiclayo
Peru
joselin$_z$*avala@hotmail.com*

Analysis laboratory, statistics SPSS, PRIMER

Evolutionary biolgy, energetics models, biology, acuaculture

+	mark
+	certificate
−	practical course
−	symposium

Karena Nguyen
6425 Satinwood Way
33637-5683 Temple Terrace
USA
knguyen63@mail.usf.edu

I am a 3rd year PhD student studying disease ecology.

I work with a host-parasite system; specifically, Biomphalaria glabrata (a snail intermediate host) and Schistosoma mansoni (a human parasite). I am hoping to build a DEB model for B. glabrata and quantify how energy allocation shifts during infection. Ideally, I want

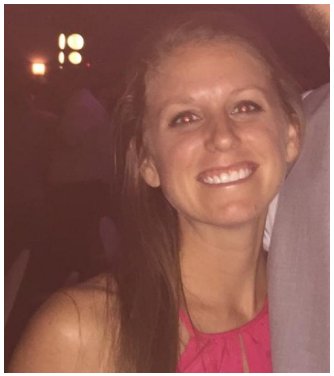
– mark
– certificate
– practical course
– symposium

Karine Heerah
Pointe du Diable
29280 Plouzane
France
karine.heerah@hotmail.fr

I am a mouvement and behavioural ecologist

Telemetry/data-logging tracking, movement ecology, habitat use, statistical modeling, foraging and diving behaviour, optimal foraging, energetic budgets, ecosystem modelling, population dynamics, anthropogenic impacts and management

– mark
– certificate
– practical course
– symposium



Katherine McFarland
111 Fernow Hall
Ithaca
USA
kmm447@cornell.edu

Bivalve physiology and ecology

Conservation of coastal aquatic systems, primarily though oyster restoration.

– mark
– certificate
– practical course
– symposium

Katherine Muller
1445 Gortner Ave.
55107 St. Paul
USA
mulle374@umn.edu

I am trained in evolutionary biology and ecology, focusing on plant systems.

I am interested in how underlying conflicts constrain the extent of cooperation between organisms. My research investigates conflicts over resource allocation as a factor limiting mutual benefits of the legume-rhizobia symbiosis.

– mark
\+ certificate
– practical course
– symposium

Kathrine Eggers Pedersen
Houmanns Alle 1 3th
Kbenhavn NV
Denmark
kep@plen.ku.dk

Basic DEB and TKTD knowledge

I am a secondyear PhD student. My project is focused on effects of combined stressors, more specifically between pesticides and pathogens. The goal is to obtain a grater understanding of the mechanisms linking the immune and detoxification systems to increase the use of pathogenic control in integrated pest management. My main interests are ecotoxicology, interaction between multiple stressors and the invertebrate detoxification system in general.

− mark
− certificate
− practical course
\+ symposium

Kim Ladermann
Kackertstrasse 10
Aachen
Germany
ladermann@gaiac.rwth-aachen.de

Master of Science Ecotoxicology at RWTH Aachen University (Germany)

Aquatic Ecology and Ecotoxicology; Ecological and Ecotoxicological Modelling

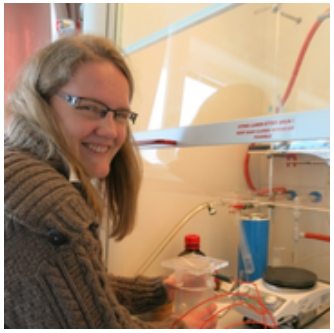
− mark
\+ certificate
\+ practical course
− symposium

Konstadia (Dina) Lika
Vassilika Voutwn
Heraklion
Greece
lika@biology.uoc.gr

Mathematical Biology

Mathematical modeling of biological systems; Current focus is on DEB theory, including applications in mixotrophy and ecophysiology.

– mark
– certificate
\+ practical course
– symposium



Kristine Pedersen
Framsenteret
Troms
Norway
kristine.pedersen@akvaplan.niva.no

Master of Chemical Engineering, PhD Environmental Engineering

Fate of pollutants in the environment (soil, ground water, sediment, surface water) Metal speciation Remediation of pollution

– mark
– certificate
– practical course
– symposium

Laura Steeves
9 Louise Ave
B3A 3V5 Dartmouth
Canada
laura.steeves@dal.ca

BSc Hons Biology, Master of Marine Management Candidate

Using DEB modelling to predict future growth and distribution of shellfish in the waters of Atlantic Canada until 2050.

−	mark
+	certificate
−	practical course
−	symposium

Laure Pecquerie
LEMAR, IUEM, rue Dumont d'Urville
Plouzane
France
laure.pecquerie@ird.fr

Marine ecology, Fisheries ecology, Theoretical biology, DEB theory

DEB theory development and applications, Impact of (multi-)stressors on marine organisms, fish population dynamics in upwelling ecosystems

−	mark
−	certificate
+	practical course
−	symposium

Liz Talbot
Prospect Place
PL1 3DH Plymouth
UK
sat@pml.ac.uk

BSc Marine Biology and Oceanography (First Class Honours)
Southampton University

Benthic ecology, ecophysiology, community modelling, health, physiology and function of marine benthic communities

− mark
\+ certificate
\+ practical course
− symposium

lola de cubber
Laboratoire d'Oceanologie et de Geosciences 28 avenue Foch, BP 80
Wimereux
France
lola.decubber@gmail.com

Master's degree in marine biology and ecology

Study of the life history traits of two annelids polychaetes in a MPA : development of a bioenergetic model and involvement in the sustainable management of these species under human pressure.

− mark
\+ certificate
− practical course
− symposium

Lotte de Vries
Retiefstraat 20C
1092XD Amsterdam
Netherlands
c.devries@uva.nl

MSc Theoretical Physics, MSc Limnology and Oceanography, currently doing a PhD with Hal Caswell (matrix models).

My main research interests are structured population models and the unexpected ecological (and evolutionary) consequences of population structure. I'm currently working on a matrix model that incorporates both simple Mendelian genetics and any kind of demographic structure.

− mark
\+ certificate
− practical course
− symposium

Maria Cardoso

58053-018 Joo Pessoa
Brazil
maria.marcolina.eco@gmail.com

PhD student, learning DEB and size-structured populations models

PhD student on ecology working with tropical fisheries. I am working in a DEB model for Nile tilapia, the second most cultivated fish in world. I am interested on the role of omnivory and predation by exotic species on the dynamic of communities, fisheries production, mathematical modeling and statistics.

− mark
\+ certificate
− practical course
− symposium

Martin Marzloff
CS 10070
Plouzane
France
martin.marzloff@ifremer.fr

fisheries science, marine ecosystem modelling, quantitative marine ecology

marine ecosystem modelling; complex systems science; effects of climate and fishing on marine ecosytems; benthic community dynamics ; climate-driven range shifts; development of decision-support tools for fisheries and marine socio-ecosystem management; assessment of ecosystem services; management strategy evaluation; marine protected areas; trophic cascade and regime shift

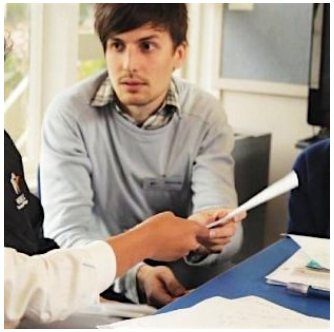
- mark
- certificate
- practical course
- symposium

Mathieu Woillez
Centre de Bretagne, STH, BP 70
Plouzane
France
mathieu.woillez@ifremer.fr

Fishery scientist with competence in geostatistics and modeling.

My main research insterests are among other in spatio-temporal dynamics of fish population and its connecivity.

- mark
- certificate
- practical course
- symposium



Matt Malishev
2/827 Park St
Brunswick
Australia
mmlshv@gmail.com

Individual-based modelling, energetics, biophysical ecology

Spatial individual-based modelling, movement ecology, energetics, biophysical ecology, niche ecology, predator-prey interactions.

– mark
– certificate
– practical course
– symposium

Maxime Vaugeois
Skok Hall - 2003 Upper Buford Circle
St. Paul
USA
maxime.vaugeois@outlokk.com

MSc Marine Biology and Ecology Ph.D. Environmental sciences

Ecotoxicology Individual-based modeling

– mark
– certificate
– practical course
– symposium

Michael Kearney
School of BioSciences Building 4
Melbourne
Australia
mrke@unimelb.edu.au

Ecophysiology, biophysical ecology, thermal biology, microclimatology, evolutionary biology, herpetology, entomology

Understanding climatic constraints on the behaviour, distribution and abundance of organisms. Evolution of adaptations to different climates. Life history evolution. Metabolic ecology. Predicting and understanding microclimates.

− mark
− certificate
\+ practical course
− symposium

Michael Susini
4 impasse teissere
Marseille
France
susini.michael@laposte.net

Master in physical oceanography and student in engineer school in Energy, Water and Environment.

Learn mode about DEB and increase my oceanographic knowledge to complete my master and engineer skills.

− mark
\+ certificate
− practical course
− symposium

Miguel Leal
Faculdade de Ciencias da Universidade de Lisboa
1749-016 Lisboa
Portugal
miguelcleal@gmail.com

Marine Ecology Prey-predator interactions and molecular trophic markers fish stoichiometry

Ecological stoichiometry and the use of this framework to study the interaction between ecosystem processes, ecology and evolution. Will try to combine this with DEB to have better physiological and fitness proxies.

−	mark
+	certificate
−	practical course
−	symposium

Misael Julissa Sosa Giles
Av. venezuela 201- Monsefu
3 peru - chiclayo
Norway
misael.sosa20@gmail.com

ESTUDIOS PRIMARIOS: MARA REICHE 1995 - 2000 ESTUDIOS SECUNDARIOS: ELVIRA GARCA Y GARCA 2001- 2005 ESTUDIOS UNIVERSITARIOS: PEDRO RUIZ GALLO 2010 - 2015

Me interesaria participar del curso virtual sobre BIOENERGeTICA conocido como Dynamic Energy Buddet Theory (DEB), tengo conocimientos sobre zooplancton marino superficial,estoy realizando un trabajo sobre ello, en una isla llamada ISLA LOBOS DE AFUERA EN EL LITORAL LAMBAYEQUE- PERU; pero me interesara saber mas cosas, mi mente esta abierta alconocimiento.

+	mark
+	certificate
−	practical course
−	symposium

Morgana Tagliarolo
School of life sciences, Westville campus
Durban
South Africa
morgana.tagliarolo@gmail.com

I am a marine biologist specialized in invertebrate physiology and intertidal ecology.

My studies never focused on a singular process or species, but I always worked at different levels from the individual to the entire ecosystem. I think that an important way to understand natural systems is to observe the processes and connections from different angles and prospective to acquire a more wide vision of the ecosystem functioning. The practice of integrating physiological studies with ecological and environmental data allowed me to answer interesting questions related to species biogeographical distribution, ecosystems carbon emissions and climate change effects.

− mark
\+ certificate
− practical course
− symposium

Myriam CALLIER
chemin de maguelone
Palavas
France
myriam.callier@ifremer.fr

Better understand DEB theory, parametrisation and simulation.

I am a researcher in aquaculture-environnement interactions. I am working on projects related to integrated multi-trophic aquaculture (IMTA). DEB could be a good tool to predict the production, excretion etc of different species in IMTA.

−	mark
+	certificate
−	practical course
−	symposium

Nathanal Sangare
BP 49
Vairao
France
nathanael.sangare@ifremer.fr

Master's degree in Oceanography specialized in ecological modeling

I'm working on putting together existing models in order to describe, Pinctada margaritifera life cycle. The objective is to understand the factors behind variations of spat collecting and thus optimize cultural practices in Tuamotu atolls. In this context my main research interests include different fields as hydrodynamic and bivalves physiology.

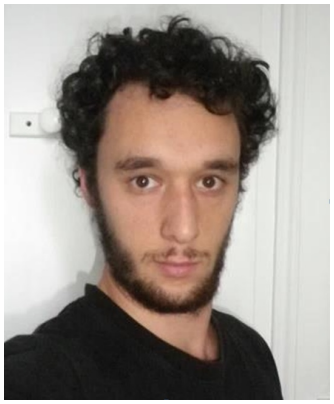
+	mark
+	certificate
+	practical course
−	symposium

Nicola Mitchell
35 Stirling Highway
Crawley
Australia
nicola.mitchell@uwa.edu.au

Ecophysiology and development of amphibians and reptiles

I explore and model the impact of the developmental environment on a range of processes including sex determination in reptiles and reproductive strategies in terrestrial breeding frogs. Increasingly, my focus is on understanding the capacity to vertebrates to adapt to environmental change, and on the application of pre-emptive conservation management.

− mark
− certificate
\+ practical course
− symposium



Nicolas Djeghri
IUEM technople Brest-Iroise rue Dumont d'Urville
Plouzane
France
nicolas.djeghri@univ-brest.fr

Oceanography, Marine Biology and Ecology. Particuliar interest in Zooplankton Ecology

Zooxanthellate jellyfishes ecophysiology. Relations host-symbiont in various environmental conditions (light, temperature, amount of food) along the life-cycle. Impact of those jellyfishes on marine systems through excretion, predation, competition with phytoplankton (for nutrient) or other jellyfishes (for prey).

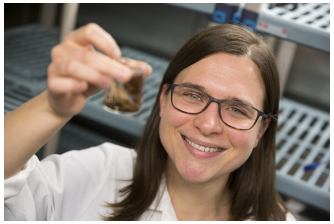
\+ mark
\+ certificate
\+ practical course
− symposium

Nigel Andrew
Natural History Museum, W77, Trevanna Rd, University of New England
Armidale
Australia
nigel.andrew@une.edu.au

Ecology; Entomology; Climate Change; Ants; Dung Beetles; Thermolimit Repiration; Physiology

I spend much of my time studying how insect biology changes along environmental gradients (latitude, altitude, climatic, agricultural): particularly their ecology, physiology and behaviour. My current research focuses on the impact of climate change on dung beetles, ants and insect-plant interactions. More details at http://insectecology.une.edu.au/

– mark
+ certificate
+ practical course
– symposium



Nika Galic
140 Gortner Laboratory, 1479 Gortner Avenue
St. Paul
USA
ngalic@umn.edu

Freshwater ecology, bioenergetics, individual-based modeling, chemical risk assessment

Ecological risk assessment, ecosystem services, ecological modelling, ecotoxicology, population ecology, freshwater ecology, bioenergetics, invasive species, wildlife management

– mark
– certificate
– practical course
– symposium

Nikos Papandroulakis Stavrakidis
PO Box 2214
GR 71003 Heraklion
Greece
ostavrak@gmail.com

/

Biology Degree, MSc Maribe Biology

Marine Biology with interest in aquaculture. Effect of climate change in the sustainable development of finfish aquaculture.

\+ mark
\+ certificate
\+ practical course
− symposium

Nils Rafael
Cois 724-JLO
Chiclayo
Peru
niter.ntrs@gmail.com

Practitioner in the microalgae laboratory.

Chemical oceanography oriented to the study of the coastal upwelling through an ecosystem approach, as well as the importance of the minimum zone of oxygen in relation to the biogeochemical processes with which it interacts and the impacts on the bioenergetics of marine organisms.

\+ mark
\+ certificate
− practical course
− symposium

Nina Marn
Bijenicka cesta 54
Zagreb
Croatia
nina.marn@gmail.com

Biology - oceanology /marine biology.

Conservation and marine biology, applications of DEB theory; for my phD research I used DEB theory to model loggerhead turtles.

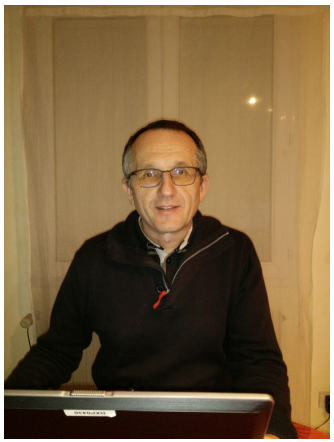
+	mark
+	certificate
+	practical course
−	symposium

Orestis Stavrakidis Zachou
Farmaki 13 A
Katerini
Greece
ostavrak@gmail.com

Degree in Biology (AUTh), MSc Marine Biology (UCC)

Marine Biology with a keen interest in aquaculture as well as its interactions with fisheries. Moreover, the development of sustainable aquaculture, particularly under the concept of climatic change, plays a central role in my research interests and goals.

+	mark
+	certificate
−	practical course
−	symposium



Patrick Lambert
50 avenue de Verdun
F-33612 Cestas Cedex
France
patrick.lambert@irstea.fr

Ingeneer in rural development Ecology Sociology Modelling

Population dynamics modelling Ecology of diadromous fish Individual based modelling Migration and river connectivity Climate changes Management of renewable resource

−	mark
+	certificate
−	practical course
−	symposium

Paulo Lagos
9 Eskvale St, Saint Kilda
Dunedin
New Zealand
lagpa454@student.otago.ac.nz

(M.Sc.) Marine Biology, currently Marine Science PhD candidate at the University of Otago.

Ecophysiology, Antarctic ecosystems and the effects of climate change on zooplanktonic organisms. Currently developing a DEB for the New Zealand krill to assess the effects of environmental stress on its biology

−	mark
+	certificate
−	practical course
−	symposium

Paulo Lagos
310 Castle Sreet
Dunedin
New Zealand
lagpa454@student.otago.ac.nz

Marine Biologist and current PhD student at University of Otago

Effects of climate change on planktonic organisms, specifically how ultraviolet radiation and temperature affects physiology and how this response is related to DEB.

– mark
+ certificate
+ practical course
– symposium

Rabie GUEZI
City Essalam, Djamaa
El Oued
Algeria
guezi.rabie@gmail.com

marine sciences,

Growth, reproduction, ecology, fish of continental water

– mark
+ certificate
– practical course
– symposium

Mofizur Rahman
House 26, Road 7, Block E,
Mirpur 1
1216 Dhaka
Bangladesh
mofizur.rahman@icddrb.org

Experimental Ecology, Spatial Analysis, GIS, R

Ecosystem Process-Function-Service

− mark
+ certificate
− practical course
− symposium

Reid Tingley
School of BioSciences, The University of Melbourne
Parkville
Australia
reid.tingley@unimelb.edu.au

PhD in Invasion Ecology - applied ecology, herpetology

I study how species traits and environmental change influence the dual processes of invasion and extinction in amphibians and reptiles. I am currently studying whether we can use DEB Theory to predict geographic variation in developmental strategies of anuran tadpoles.

+ mark
+ certificate
+ practical course
− symposium

Roger Nisbet
Ecology, Evolution and Marine Biology
Santa Barbara
USA
nisbet@lifesci.ucsb.edu

PhD in theoretical physics. Postdoctoral training in biology.

Many areas of ecological theory and modeling with emphasis on models that relate processes at different levels of biological and ecological organization. Current work focuses both on fundamentals of DEB and DEB-inspired theory and on its application in ecotoxicology and nanotoxicology.

− mark
− certificate
\+ practical course
− symposium

Roland Kuhl
Arheilger Weg 17
Rodorf
Germany
roland.kuhl@ibacon.com

Diploma in Biology

Aquatic ecotoxicology; effect modelling; pollinators

− mark
\+ certificate
\+ practical course
− symposium

Romain Richard
University of amsterdam,
IBED, P.O.Box 94248
1090 GE Amsterdam
Netherlands
r.c.j.richard@uva.nl

ecology, evolutionary biology, structured population dynamics, behavioral ecology, ecophysiology, Daphnia

I am interested in studying how population processes affects the life history of individuals, and how in turn, patterns of growth fecundity and survival translate to the population level. The approach taken is to model/consider life history as a resource limited process and use physiologically structured population models.

– mark
– certificate
\+ practical course
– symposium

Romain Lavaud
343 Avenue Universite
E1C 9B6 Moncton
Canada
romain.lavaud@dfo-mpo.gc.ca

Marine biology, physiology, ecology, oceanography

Ecophysiology of marine bivalves, fish and algae in coastal ecosystems in response to environmental variability. Feeding ecology of suspension feeders. Ecosystem modelling.

– mark
– certificate
– practical course
– symposium

Rory Telemeco
1009 E Magnolia Ave
Auburn
USA
telemeco@auburn.edu

PhD in Ecology and Evolution. 2 postdocs: one in physiology and modeling and the other in genomics

Understanding mechanisms of organismal response to global change. Primarilly work with reptiles and temperature change.

– mark
– certificate
– practical course
– symposium

Rose Stainthorp
National Oceanography Centre, Rm 344/27
SO14 3ZH Southampton
UK
res1n13@soton.ac.uk

PhD Ocean Earth Sciences (3rd year)

Bioenergetics of thermal tolerance in Class Echinodermata

– mark
– certificate
+ practical course
– symposium

Salome Fabri-Ruiz
6 Boulevard Gabriel
Dijon
France
salome.fabri-ruiz@u-bourgogne.fr

Oceanography and Marine Environment specialize in Modelling and Large Spatial scale in the Southern ocean

My main interest is Species distribution modelling on Echinoids in the Southern ocean. I focus on impact of climate change but also on heterogeneity of the data in modelling. I want also to combine different approaches of modelling.

− mark
+ certificate
+ practical course
− symposium

Shu-Ping Huang
70 Lienhai Rd.
Kaohsiung
Taiwan
sphuang0711@gmail.com

physiological ecology, herpetology, biophysical models, respirometry

I am interested in investigating the effect of climate changes on habitat suitability, physiological function, and activities of animals. I employ biophysical models, lab experiments, and field surveys to approach these questions using mainly high-mountain reptiles as study animals.

− mark
− certificate
+ practical course
− symposium

slimane ben miled
Institut pasteur place pasteur
tunis
Tunisia
slimane.benmiled@fst.utm.tn

math, ecology, evolution, modelling

sex allocation theory, cancer treatment, mathematical modelling

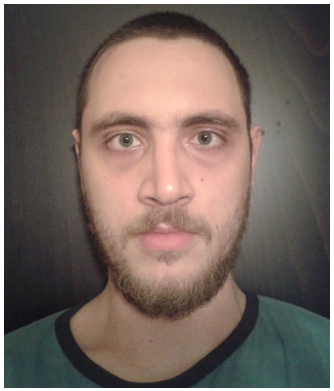
+	mark
+	certificate
−	practical course
−	symposium

Starrlight Augustine
Framsenteret
Troms
Norway
sta@akvaplan.niva.no

Marine ecology, Ecotoxicology, Theoretical biology, DEB theory

DEB theory development and applications, Impact of (multi-)stressors on marine organisms, patterns in sentitivity, development

+	mark
+	certificate
+	practical course
−	symposium



Stratos Batziakas
Pellis 141
Heraklion
Greece
batziakas_str@hcmr.gr

Biology graduate, Environmental biology post-graduate, PHD Candidate in Biology

Fully and semi- automated image analysis systems for zooplankton identification. Size spectrum theory and its possible applications in the pelagic ecosystem health assessment and monitoring. Marine ecosystem dynamics and ecosystem modeling.

\+ mark
\+ certificate
− practical course
− symposium

Sylvie Gaudron
B.P.80
Wimereux
France
sylvie.gaudron@upmc.fr

DEB model of two lugworms (Annelida Polychaeta) species at different stages of their life cycle.

My main research interest is the life cycle of marine invertebrate species of coastal and deep sea species (mainly bivalves and polychaetes)

− mark
− certificate
− practical course
− symposium

Tamar Guy-Haim
Duesternbrookerweg 20
Kiel
Germany
tguy-haim@geomar.de

Community ecology, Marine/Benthic ecology, Biogeochemistry, Phylogenetics, Software engineering.

Ecological modelling: species interactions, food webs, community and ecosystem level modelling, with regards to global changes; Invasion biology, biogeography and dispersal of benthic species.

− mark
\+ certificate
− practical course
− symposium

Tnia Sousa
DEM - Instituto Superior Tecnico (IST-ID 509830072), Av. Rovisco Pais, n1
1049-001 Lisboa
Portugal
taniasousa@tecnico.ulisboa.pt

Environmental Engineering. PhD in Environmental and Earth and Life Sciences.

Thermodynamics of life; the analysis of societal energetic systems and the links with the economy.

− mark
− certificate
\+ practical course
− symposium

Tanjona Ramiadantsoa
430 Lincoln Drive, Birge Hall
Madison
USA
ramiadantsoa@wisc.edu

Theoretical ecology focusing on spatial processes with background in Mathematics

I am developing a theoretical model for a generalized thermal performance curve that integrates physiology, ecology, and behavior; and uses energy (budget) as a main currency.

– mark
– certificate
– practical course
– symposium

Thomas Krueger
EPFL ENAC IIE LGB, GR C2 525 (Btiment GR), Station 2
Lausanne
Switzerland
thomas.krueger@epfl.ch

marine biology, biochemistry, ecology, PhD in coral reef ecology

Coral reef biologist, working on the ecophysiology of symbiotic corals. My current research focuses on the nutritional physiology of corals using stable isotopes and correlative TEM and NanoSIMS. The broader context of my work is to understand the specific impact of Climate Change on the stability of the coral symbiosis.

– mark
+ certificate
– practical course
– symposium

Thomas Guyondet
343 Universite Avenue
E1C9B6 Moncton
Canada
thomas.guyondet@dfo-mpo.gc.ca

Engineering and coastal oceanography: hydrodynamics and biogeochemistry

Numerical modelling of coastal ecosystems with focus on role of bivalves in nutrient cycling and application for aquaculture and its interactions with the environment: food limitation, biodeposition, response to stressors such as hypoxia and non-optimum temperature, salinity and pH.

- mark
- certificate
- practical course
- symposium

Tido Strauss
Kackertstrasse 10
Aachen
Germany
strauss@gaiac.rwth-aachen.de

IBMs, DEB theory, interface between DEB and environment

Plankton ecology, individual based population modelling, lake ecosystem models, ecotoxicology

- mark
- certificate
- practical course
- symposium

Urtzi Enriquez-Urzelai
lg Onon 7, Tornon
Villaviciosa
Spain
urtzi.enriquez@gmail.com

I studied Biology and a MSc in Biodiversity

My research interests are in biogeography, niche evolution, and global change biology. To predict species and populations vulnerability to global warming I would like to understand the mechanistic link between environments and organisms using DEB and NicheMapR modelling frameworks.

– mark
\+ certificate
– practical course
– symposium

Valery Forbes
1475 Gortner Avenue
St. Paul
USA
veforbes@umn.edu

PhD Coastal Oceanography

ecotoxicology, population modeling, aquatic invertebrate ecology and physiology

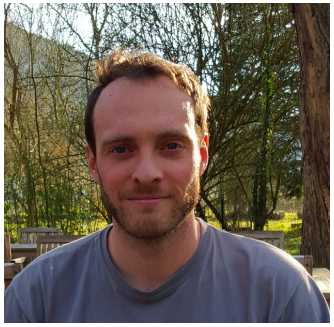
– mark
– certificate
– practical course
– symposium

Vaskar Nepal KC
1208 Greate Road
Gloucester Point
USA
vnepalkc@vims.edu

Fisheries Science; marine science; applied data analysis

Fisheries ecology and management; biogeography; anthropogenic impacts on fisheries population ecology; invasive species and conservation ecology

− mark
\+ certificate
\+ practical course
− symposium



Virgile Baudrot
43 bd du 11 novembre 1918
VILLEURBANNE
France
virgile.baudrot@posteo.net

PhD : modeling transfer of parasites and chemical compounds in food webs.

My main research theme is on the development of models in ecology, ecotoxicology and eco-epidemiology. I'm particularly interested in how food webs topology regulate the dynamics of disease (parasites) and chemical pollution, and in feedback how food webs respond to these contaminations.

− mark
− certificate
− practical course
− symposium

Viviane David
Rue Jacques Taffanel
Verneuil-en-Halatte
France
viviane.david@ineris.fr

biology, ecology, ecotoxicology, modelisation, statistics (Engineering school then phD student)
The aim of my phD project is to assess the effects of chemicals on the population dynamics of a freshwater fish (Threespined stickleback). In order to perform this, we would like to developp a DEB-IBM model. The data come from mesocosm experiments conducted in the INERIS platform.

−	mark
+	certificate
−	practical course
−	symposium