

Professor Angel Perez-Ruzafa- UNIVERSIDAD DE MURCIA

Director of the course



Born in Murcia (Spain) in 1958, BSc in Biology by the University of La Laguna (Canary Islands, Spain) in 1980, and PhD degree in 1989 by the University of Murcia. He is currently Full Professor of Ecology at the Department of Ecology and Hydrology of the University of Murcia. His main research topics are on coastal lagoons ecology, biological indicators, marine protected areas and on the ecology of echinoderms and benthic fishes. He has authored or co-authored 82 books or book chapters and 123 articles in peer reviewed journals, 96 of them included in the core SCI, accounting for an Hindex of 29. His research has been developed through 49 national and international projects at Galapagos Islands, Atlantic Archipelagos (Azores, Madeira, Canary Islands and Cabo Verde), Antarctic and the Mediterranean, being coordinator of the European Commission 6thFP Project EMPAFISH ('European Marine Protected Areas as tools for Fisheries management and conservation') and OOCMUR (Coastal Oceanographic Observatory of Murcia) project for the Spanish Ministry of Science and Innovation and the Murcia Regional Government. Former Vice-Chancellor of University Extension and International Relationships of the University of Murcia. He is scientific assessor in environmental management and research projects with European, Spanish and Regional administrations and is referee for 51 peer review journals and 8 national and international agencies and member of the Editorial Board of the journals Marine Environmental Research, Transitional Waters Bulletin, Vieraea and Revista de la Academia Canaria de Ciencias. More than 225 lectures in 152 popular science, postgraduate and PhD courses at nine Universities in Spain and 15 international institutions. Has directed 17 Master degree theses and 16 PhD theses (at the Universities of Murcia, do Algarve and dos Azores

Professor Concepción Marcos Diego- UNIVERSIDAD DE MURCIA

Co-director of the course



Professor of Ecology at the University of Murcia (webs.um.es/cmarcos).

She teaches Ecology and Marine Ecology, and researches in Ecology and Management of Coastal Marine Ecosystems. Has published 49 scientific books or book chapters and 82 articles, mainly related to ecology of coastal lagoons, and has participated in more than 80 national and international research projects and technical assistance contracts. Has conducted 5 doctoral theses, 7 master's degree and 13 graduate works. She is currently the researcher responsible for the research group "Ecology and management of coastal marine ecosystems" at the University of Murcia.

Elena Sánchez-Badorrey – UNIVERSIDAD DE GRANADA



Elena Sánchez-Badorrey is Professor of Environmental Fluid Mechanics associated to the Department of Mechanical Engineering and Hydraulics of the Civil Engineering School and researcher of the Water Research Institute at the University of Granada (UGR, Spain). Since

2016, she is the Coordinator of the UGR Master program in Water Sciences and Techniques (Master IDEA). She has collaborated in and/or led over 15 projects most of them with interdisciplinary research teams from European and Spanish Institutions.

Her research focuses on ecohydraulics and the water-interphase dynamics, through field experiments and mathematical and numerical modeling. Of special interest to her are: (1) the dynamics and spatial and temporal variability of the biogeochemical fluxes across the water-sediment interphase in shallow water bodies and their influence on benthic ecosystems, and (2) the analysis of ecohydraulic solutions to enhance the renovation capacity of natural and artificial water masses.

Arturas Razinkovas- KLAIPEDA UNIVERSITY (LITHUANIA)



Current Position

Lead researcher at the Open Access Centre for Marine Research , Klaipeda University
Prof. at the department of Ecology, Klaipeda University

Education

1990 - Institute of Zoology of Byelorussian Academy of Science, Doctoral thesis.
1983 – Vilnius University, degree in biology

Employment Record

1983-1984: Assistant, Semiconductor physics institute, Lithuanian Academy of Sciences
1984-1989: PhD student, Institute of Ecology, Lithuanian Academy of Sciences
1990-1991, Researcher, Institute of Ecology, Lithuanian Academy of Sciences
1991 – 2010 Senior researcher, Klaipėda University
2010 - present: lead researcher at, Klaipeda University

Experience in Research and Other Activities	<p>Courses in Estuarine Ecology and Productivity of Marine Ecosystems at the Klaipeda university</p> <p>Supervising of BS and MS and Ph.D. student projects in information technology and water ecology</p> <p>Member of the PhD board in Water Ecology</p> <p>1993-1996: Team member of the TEMPUS project JEP-6001 "Computer Based Environmental Studies" COBES-Lithuania.</p> <p>FP5 projects</p> <p>2002 2005 CHARM EVK3-CT-2001-00065, principal investigator</p> <p>2002 2005 BIOFLOW EVR1-CT-2001-20008, principal investigator</p> <p>2003 2006 COLAR EVK3-CT-2002-80007, project co-ordinator</p> <p>FP6 projects</p> <p>2004 2009 MARBEF GOCE-CT-2003-505446, principal investigator</p> <p>BONUS ERA-NET PLUS projects</p> <p>AMBER principal investigator</p> <p>COCOA – principal investigator</p> <p>FP7 projects</p> <p>INFORM – principal investigator</p> <p>H2020 projects</p> <p>ECOPOTENTIAL – principal investigator</p> <p>SBP projects</p> <p>2010 -2013 WEBLAB principal investigator</p> <p>2010- 2013 ARTWEI co-ordinator</p> <p>2017-2020 LiveLagoons, co-ordinator</p> <p>Baltic Marine Biologists – president 2012-2015</p> <p>European Marine Board – member since 2016</p>
Improvement of Qualification	<p>UNESCO course on GIS & spatial modeling, Arendal, Norway, 1993</p> <p>GRID-Arendal course on GIS application in ecology, Druskininkai, Lithuania, 1994</p> <p>USAID training in coastal management & science administration (Chicago-Rhode Island – Baltimore), 1996</p>

Research Area Aquatic ecology, modelling

Scientific From 1990 until present:

Publications and Over 50 scientific publications, supervisor of 7 PhD projects

Methodical Works

Rasa Morkunė- KLAIPEDA UNIVERSITY (Lithuania)



Work address: Open Access Centre for Marine Research, Klaipėda University, Herkaus Manto str. 84, LT-92294 Klaipėda, Lithuania.

Academical and work positions

2009-at present: Research assistant in Open Access Centre for Marine Research (previously named as Coastal Research and Planning Institute), Klaipėda University.

2016-at present: Lecturer for the subject “Population ecology” and supervision students’ scientific works in Department of Nature Sciences of Faculty of Marine Technology and Natural Sciences, Klaipėda University.

2015 – 2016: Data analyst/ biological diversity expert at Coastal Research and Planning Institute.

2015 – 2016: Biologist-expert at Lithuanian Ornithological Society.

2010-2015: Assistant for the students’ field practice in “Vertebrate zoology” and supervision students’ scientific works in Department of Nature Sciences, Faculty of Marine Technology and Natural Sciences, Klaipėda University.

2008-2009: Specialist in Klaipėda County Governor’s Administration (Subdivision of Territory Planning and Environment, Department of Regional Development).

Education

2009-2016: PhD in Biomedical sciences, Ecology and Environmental Sciences at Faculty of Marine Technology and Natural Sciences, Klaipėda University. Thesis (defended in June 2017): Food web of the Lithuanian Baltic Sea coastal zone: structure and organic matter flows. Supervisor: prof. dr. Artūras Razinkovas-Baziukas.

2007-2009: M. Sc. (Ecology and Environmental Sciences) at Faculty of Mathematics and Natural sciences, Klaipėda University.

2003-2007: B. Sc. (Ecology and Environmental Sciences) at Faculty of Mathematics and Natural sciences, Klaipėda University.

Studies abroad, internships

January 2011: Attended the Stable Isotope Laboratory (the Leibniz Institute for Baltic Sea Research, Warnemunde, Germany) to learn about the stable isotope mass spectrometry and prepare samples for the stable isotope analysis (financial support for one month internship was received from project AMBER and Research Council of Lithuania).

2007-2008 autumn semester: M. Sc. (Aquatic biology) studies at University of Southern Denmark by ERASMUS European Exchange Program.

Research interests:

Trophic ecology using stable isotope analysis (carbon, nitrogen, sulfur isotopes) in aquatic ecosystems;

Food web modeling using Ecopath with Ecosim;

Impacts of wind-energy facilities on birds and bats.

Scientific publications

Petraitis A., Uznytė R., 2008. Žuvėdru (*Sternidae*) pavasarinė migracija Palangos pajūryje. *Jūra ir aplinka*, 1 (16), P. 42- 53.

Petraitis A., **Uznytė R.**, 2010. Abundance and seasonal migration of gulls (*Laridae*) on the Lithuanian Baltic Sea coast. *Acta Biol. Univ. Daugavp.*, 10 (2), P. 147-164 (ISI Master List).

Morkūnė R., 2011. Trophic peculiarities of the Great Cormorant, Grey Heron and Long-tailed Duck on the Baltic Sea Lithuanian coast: a stable isotope approach. *Ekologija*, 57 (4), P. 173-178 (ISI Master List).

Morkūnė R., Lesutienė J., Barisevičiūtė R., Morkūnas J., Gasiūnaitė Z. R., 2016. Food sources of wintering piscivorous waterbirds in coastal waters: A triple stable isotope approach for the southeastern Baltic Sea. *Estuarine, Coastal and Shelf Science*, 171, P. 41-50 (ISI with IF).

Razinkovas-Baziukas A., **Morkūnė R.**, Bacevičius E., Gasiūnaitė Z. R., 2017. Trophic network model of exposed sandy coast: linking continental and marine water ecosystems. *Estuarine, Coastal and Shelf Science* (in press; ISI with IF).

Methodical manual:

Morkūnas J., **Morkūnė R.**, Raudonikis L., 2015. Nardančių vandens paukščių atpažinimo žinynas. Klaipėdos universitetas. - Kaunas: Lututė, 46 p. ISBN 978-9955-37-175-5.

Courses attended

„Stable isotopes: analysis and application in trophic ecology“, Ghent University, Belgium, March 24-27, 2014.

„Recipes for cooking a successful research paper“, Klaipėda University, Lithuania, November 12-15, 2013.

"Introduction to practical biostatistical analysis with R", Klaipėda University, Lithuania, September 28-30, 2011.

“Lagoon Ecosystem Modelling (ECOPATH/ECOSIM): From Hydrodynamics to Fisheries”, Klaipėda University, Lithuania, June 21-23, 2011.

Workshop on stable isotopes, Stockholm University, Sweden, September 14-24, 2010.

„Stable Isotopes in Earth System Sciences“, University of Gothenburg, Sweden, August 22-28, 2010.

„Fish behaviour“, University of Gothenburg, Sweden, March 21-26, 2010 (financial support of participation was obtained from Nordic Marine Academy).

Participation in international projects

2016-at present: Horizon 2020 Programme project „Improving future ecosystem benefits through earth observations“ (ECOPOTENTIAL).

2010-2013: Interreg South Baltic Programme project „South Baltic WebLab – a virtual laboratory on marine science“ (WEBLAB).

2010-2011: BONUS ERA-NET PLUS Nr. 21V-1 programme project „Assessment and modelling of Baltic ecosystem response“ (AMBER).

2007: Interreg IIIA Programme project „Baltic environmental education seminars: society, culture, nature, sustainable development“ (BALTESS).

Participation in national projects

2015-2017: Project “Development of wind energy and important areas for biodiversity (European Economic Area Financial Mechanism).

2012-2014: Project „Lithuanian maritime sectors’ technologies and environmental research development“ (EU Structural Funds).

International conferences

7th European Coastal Lagoons Symposium, Murcia, Spain, 2016.

10th Baltic Sea Science Congress 2015, Riga, Latvia, 2015.

5th International Sea Duck Conference, Reykjavik, Iceland, 2014.

World Conference on Natural Resource Modeling „Modeling our way back to the future – 2014“, Vilnius, Lithuanian, 2014.

9th Baltic Sea Science Congress, Klaipėda, Lithuania, 2013.

ECSA 52nd International Symposium „Research and management of transitional waters“, Klaipėda, Lithuania, 2012.

8th Conference of the European ornithologists’ Union, Latvia; Riga, 2011.

5th International Student Conference „Biodiversity and functioning of aquatic ecosystems in Baltic Sea region“, Palanga, Lithuania, 2010.

Other professional activities

Organization of international events at Klaipėda University, Lithuania:

1. 5th International Student Conference „Biodiversity and functioning of aquatic ecosystems in Baltic Sea region“, 5-8 October 2010;
2. Courses „Lagoon Ecosystem Modelling (ECOPATH/ECOSIM): From Hydrodynamics to Fisheries“, 21-23 June 2011;
3. Upcoming - 18th Conference of Goose Specialist Group, 27 – 30 March 2018.

Preparation of avian part in Environmental Impact Assessment reports and organization of bird and bats monitoring and preparation of monitoring reports (onshore and offshore wind energy facilities).

Educational activities for schoolchildren in the local Nature Museum of the Klaipėda university.

Preparation of popular science articles.

Membership at Lithuanian Ornithology Society (from 2009).

Alí Erturk- ISTANBUL TECHNICAL UNIVERSITY (Turquía)



Birth place: 13/09/1977, İstanbul Turkey

Education:

- BSc in İstanbul Technical University, Faculty of Civil Engineering, Department of Environmental Engineering (2000)
- MSc in İstanbul Technical University, Department of Environmental Engineering, Program of Environmental Engineering (2002)
- BSc in İstanbul Technical University, Faculty of Natural Sciences, Department of Chemistry (2006)
- PhD in Klaipėda University, CORPI (2008) on Biomedical Sciences, Ecology and Environmental Sciences.

Work Experience:

- Research Assistant in Istanbul Technical University, Faculty of Civil Engineering, Department of Environmental Engineering (2001-2009)
- Assistant Professor in Istanbul Technical University, Faculty of Civil Engineering, Department of Environmental Engineering (2009-2014)
- Associate Professor in Istanbul University, Faculty of Aquatic Sciences, Department of Freshwater Biology (2014-2017)
- More than three years in Lithuania working as a guest scientist

Publications:

- More than 20 articles in ISI journals
- 3 Contribution to book chapters
- More than 350 citations according to Google Scholar

SCIENTIFIC INTEREST AND EXPERTISE

- Water quality management
- Drainage basin modelling
- Water quality modelling
- Ecosystem modelling

INTERNATIONAL COLLABORATIONS

- Ongoing collaboration with Klaipeda University on Ecosystem Modelling of the Curonian Lagoon since 2004.
- Collaboration with Bucherest Univesity Departmant of Systems Ecology
- Collaboration with ISMAR-CNR on further development of SHYFEM model

Georg Umgiesser , CNR (Consiglio Nazionale delle Ricerche)-ISMAR (istituto di Science Marine)



Laurea cum laude in Oceanography (1986), researcher from 1992, second *laurea cum laude* in Physics (1997) and senior scientist at ISMAR Venice since 2001. He held various courses on oceanography and numerical techniques at Venice and Padua University. He is heading a group of 5 scientists that mainly studies lagoons and the coastal zone through numerical modeling. He also holds an associated position as lead researcher at Klaipeda University, Lithuania. He wrote more than 100 papers between refereed journals (50 on ISI), refereed books (10), proceedings (60) and other journals.



2003 Degree with laude in Environmental Sciences

2004-2005. I started a research fellowship by the National Research Council in IAMC (Oristano, REMA project) working on the ergodicity of the Marine Planktonic Ecosystem using a Lagrangian model. In this time I studied the transport scales in the Oristano Gulf. **2006-2011** I had a research fellowship by the National Research Council in ISMAR (Venice). I applied hydrodynamic and water quality numerical models in the Cabras lagoon, in the Gulf of Cagliari and S. Gilla lake and in the Taranto Sea to simulate the ecological response under different scenario conditions (climate change and management choices). I started to study the Venice lagoon using SHYFEM numerical model to define the effect of MOSE barriers, the variability of salinity, of temperature and of transport scales considering the Water Framework Directive, and the relationship between current bottom stress and granulometric data. I developed a individual based model of larval growth coupled to particle tracking model and hydrodynamic model to study the recruitment in Venice lagoon. In this period I started to use QGIS program to analyze in quantitative way the numerical results and to enhance the database of the Venice lagoon atlas.

2009 PhD in Ecology and Management of Biological Resources I started to apply numerical models to study the biological variability in a small area of the Venice lagoon and during the PhD I applied numerical models to explore the feasibility of management choices.

2011-2012 I had a research fellowship by the National Research Council in ISMAR (Lesina, DSS Pesca). I was responsible of the modeling activity in Adriatic Sea in the project DSS Pesca. Using ROMS model outputs in Adriatic sea I applied the ICHTYOP individual based model to investigate the connectivity of nursery area in the basin, developing a matlab suite of program to analyze specific netcdf outputs.

2013-2015 I had a research fellowship by the National Research Council in ISMAR (LaSpezia, RITMARE) in the RITMARE project in habitat and connectivity action. I developed the 3D lagrangian module of SHYFEM model, and I refined and integrated the larval growth module and a specific connectivity module, I used the model to study the connectivity sea-lagoon and intra-lagoon in several lagoonal systems (Venice, Mar Menor, Curonian lagoon), the effect of the vertical component on particle dispersal, the connectivity of recruitment areas and of Marine Protected Areas in the Adriatic Sea and I refined the study on recruitment of shellfish in the Venice lagoon.

2016-2017 I have a research fellowship by the National Research Council in

ISMAR (Venice). I developed the study of the dispersal of dissolved or particulated substances from the rivers in the Adriatic Sea, taking into account the descriptors of Marine Strategy, to enhance the performance of cumulative impacts models in the framework of maritime spatial planning studies. I developed the simulation of faecal bacterial fate in Venice lagoon. I studied the consequences of the new Tresse channel on hydrodynamic and transport scales of the Venice lagoon and in generating anoxia events. I participated to the submission of 3 project proposal in european calls.

Professional

[1] Amos C.L., Umgiesser G., **Ghezzi M.**, Kassem H, and Ferrarin C. Sea surface temperature trends in Venice lagoon and the adjacent waters. *Journal of Coastal Research online published pre-print 2016 ISSN 0749-0208 IF 0.98*

[2] DePascalis, F.; Petrizzo, A.; **Ghezzi M.**; Lorenzetti, G.; Manfè, G.; Alabiso, G. & Zaggia, L. Estuarine circulation in the Taranto Seas *Environmental Science and Pollution Research*, **2016**, *23*, 12515-12534 ; IF2015 2.76

[3] **Ghezzi M.**; De Pascalis, F.; Umgiesser, G.; Zemly, P.; Sigovini, M.; Marcos, C. & Pérez-Ruzafa, A. Connectivity in Three European Coastal Lagoons *Estuaries and Coasts*, **2015**, *38*, 1764-1781; IF2015 2.65

[4] Bellafiore D., **Ghezzi M.**, Tagliapietra D., Umgiesser G., *Climate change and artificial barrier effects on the Venice Lagoon: Inundation dynamics of salt marshes and implications for halophytes distribution*, Ocean & Coastal Management, Volume 100, November 2014, Pages 101-115, ISSN 0964-5691, <http://dx.doi.org/10.1016/j.ocecoaman.2014.08.002>. ; IF2014 2.39

[5] Ferrarin, C., M. Bajo, D. Bellafiore, A. Cucco, Pascalis F., **Ghezzi M.**, and Umgiesser G. (2014), *Toward homogenization of Mediterranean lagoons and their loss of hydrodiversity*, Geophys. Res. Lett., 41, 5935–5941, doi:10.1002/2014GL060843 IF2014 4.19

[6] Umgiesser, G., Ferrarin C. Cucco A., De Pascalis .F, Bellafiore D., **Ghezzi M.**, and Bajo M. *Comparative hydrodynamics of 10 Mediterranean lagoons by means of numerical modeling*, J. Geophys. Res. Oceans, 119, **2014** doi:10.1002/2013JC009512. IF 2014 3.42

[7] Ferrarin, C., **Ghezzi M.**, Umgiesser, G., Tagliapietra, D., Camatti, E., Zaggia, L., and Sarretta, A.: Assessing hydrological effects of human interventions on coastal systems: numerical applications to the Venice Lagoon, *Hydrol. Earth Syst. Sci.*, 17, 1733-1748, doi:10.5194/hess-17-1733-2013, 2013. IF2013 3.642

[8] Cucco A., Sinerchia M., Lefrancois C., Magno P., **Ghezzi M.**, Umgiesser G., Perilli A., Domenici P. *A metabolic scope based model of fish response to environmental changes*. *Ecological Modelling* 237, **2012**, Pages 132-141, IF2012: 2.069

[9] **Ghezzi M.**, Sarretta A., Sigovini M., Guerzoni S., TagliapietraD., e Umgiesser G. *Modeling the inter-annual variability of salinity in the lagoon of Venice in relation to the Water Framework Directive typologies*. *Ocean & Coastal Management* 54, Issue 9, Sep **2011**, Pages 706-719 IF2011 1.95

[10] **Ghezzi M.**, Guerzoni S., Cucco A., e Umgiesser G. *How the MoSE project is*

changing the Venice Lagoon dynamic. Highlights CNR 2009-2010 Page 58

[11] Ghezzi M., Guerzoni S., Cucco A., e Umgiesser G. *Changes in Venice Lagoon dynamics due to construction of mobile barriers*. Coastal Engineering 57, Issue 7, Jul **2010**, Pages 694-708 IF 1.62

[12] Ferrarin C., Umgiesser G., Bajo M., Bellafiore D., De Pascalis F., **Ghezzi M.**, Mattassi G., Scroccaro I. *Hydraulic zonation of the lagoons of Marano and Grado, Italy. A modelling approach*. Estuarine, Coastal and Shelf Science 87, Issue 4, 20 May **2010**, Pages 561–572-if2010 1.88

[13] Magni P., Como S., Cucco A., De Falco G., Domenici P., **Ghezzi M.**, Lefrancois C., Simeone S. e Perilli A. *Multidisciplinary and ecosystemic approach as a tool in management plans of the Oristano Lagoon gulf System (Sardinia, Italy)*. Transitional Water Bulletin, 2 Issue 2, **2008**, pp. 41-62 eISSN 1825-229X IF 2008 0.40

[14] Cucco A. Perilli A. De Falco G., **Ghezzi M.** e Umgiesser, G. *Water circulation and transport timescales in the Gulf of Oristano*. Chemistry and ecology. 22, suppl. 1, **2006**, pp 307-331

[15] **Ghezzi M.**, Perilli A, Cucco A, Alabiso G e Sinerchia M. *Modellizzazione della qualità delle acque nei Mari di Taranto e simulazione delle conseguenze dei cambiamenti climatici*, ottobre 2009 [

16] **Ghezzi M.**, Cucco A, Perilli A, e Olita A *Studio modellistico Idrodinamico e di Qualità delle Acque nell'ambito del Progetto golfo di Cagliari Parte II: Qualità delle Acque*. Febbraio 2008

[17] **Ghezzi M.** et al. Progetto di ricerca SIGLA, Prot n. 11591 *Modello ecologico del Golfo di Oristano e dello Stagno di Cabras OR.2 Attività 3*, luglio 2008