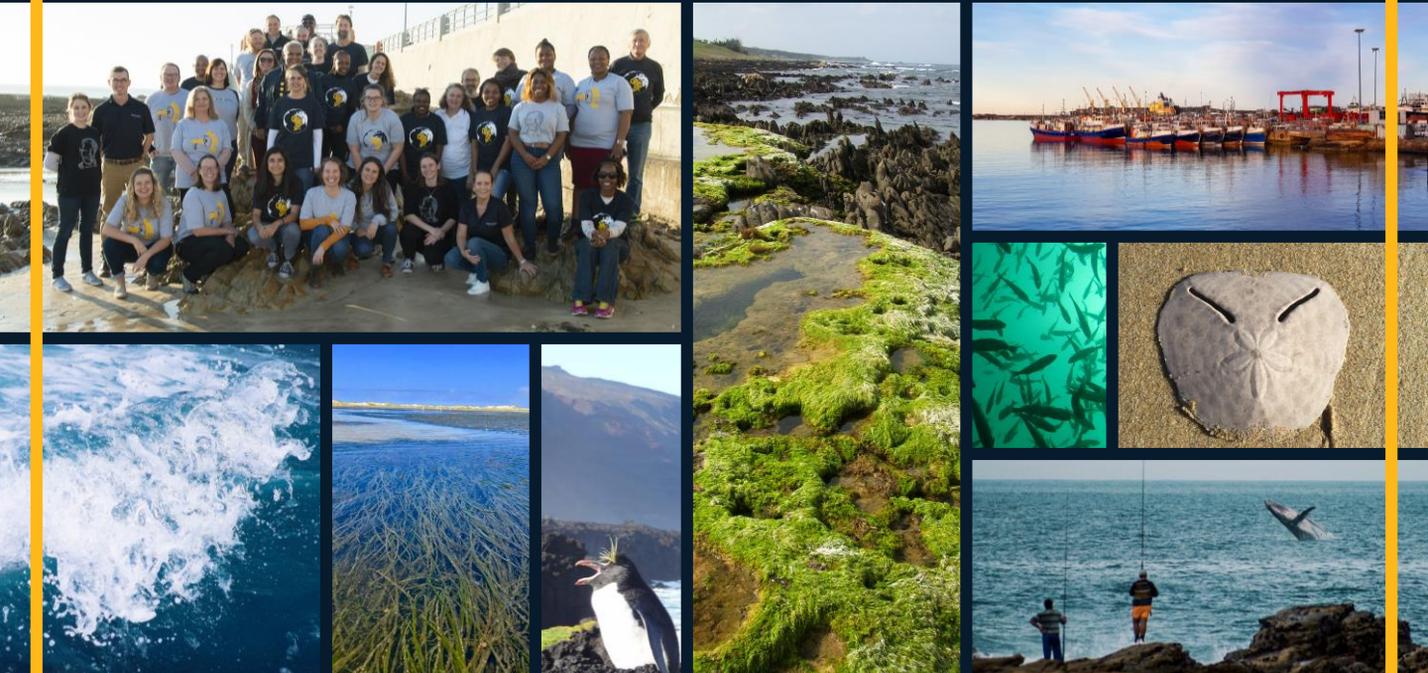


Discovering Diversity



Institute for Coastal and Marine Research (CMR)

Research Symposium Programme

13 November 2019
Nelson Mandela University
North Campus Conference Centre

NELSON MANDELA
UNIVERSITY







The Institute for Coastal and Marine Research (CMR) is a **leading ocean and coastal sciences transdisciplinary research institute** that spans across all seven Nelson Mandela University Faculties, reporting directly to the Deputy Vice-Chancellor: Research, Innovation and Internationalisation. Our membership also includes external research groups, stakeholders and international collaborators. With our position at the Ocean Sciences Campus, we contribute significantly to the University's Ocean Sciences Strategy and the University's drive towards excellence.

The CMR's pool of expertise is the largest in the region, and we enjoy showcasing our research to our University colleagues, external collaborators and stakeholders. The decision was made in 2017 to host an **annual event to promote our transdisciplinary ocean and coastal sciences research**. A total of 18 staff members and six postgraduate students presented on their work at our first symposium. The 2018 research symposium focused on our **Research Associates**. A visiting researcher from the IRD (France) presented the plenary talk, and we were delighted to give 15 of our RAs and their colleagues a platform to communicate their research. The CMR hosted a number of parallel events during this occasion. The Algoa Bay Project had a session dedicated to their research, and a lunchtime meeting with stakeholders was held. Members from the Nelson Mandela Bay Maritime Cluster attended the morning sessions, and had a meeting during the afternoon to discuss business development to focus on maritime incubation and ocean business. Furthermore, the launch for BOATS, a mobile app and board game developed by CMR members from the Department of Computing Sciences, took place at our symposium. This game educates children about plastic pollution in the ocean, whilst teaching coding and critical thinking skills.

This year, the CMR is **Discovering Diversity** in research in the areas of biological science, social science, the economy and environmental management. Researchers from the University's Engineering Department will showcase their drones used for marine work. The 2019 symposium falls within the week that the CMR is hosting a delegation from the Helmholtz Institute for Functional Marine Biodiversity at the University of Oldenburg (Germany). A professor from the Coastal and Marine Sciences Institute from the University of California, Davis (USA) visits our University during this week too, and the CMR is delighted to host these international colleagues for talks at this year's symposium!



Morning Sessions

<i>Time</i>	<i>Item</i>
08:00-18:15	Arrival
08:15-08:30	Welcoming Address <i>Dr Kwezi Mzilikazi: Director Research Management</i>
Session 1: Biological Banter	
08:30-09:00	Changing biodiversity in changing environments: Temporal turnover across scales of time and space. <i>Professor Helmut Hillebrand</i>
09:00-09:20	Microalgae have a bright future: A situation assessment of their use in ecosystem health assessments. <i>Dr Gavin Snow</i>
09:20-09:40	Hidden in plain sight: Creatures and curiosities of South Africa's stromatolites. <i>Dr Gavin Rishworth</i>
09:40-10:00	Microalgae in semi-arid freshwater and coastal freshwater ecosystems. <i>Dr Phumelele Gama</i>
10:00-10:20	Musings on zooplankton and dynamic coastal ecosystems. <i>Dr Shaun Deyzel</i>
10:20-10:50	Recognising spatial pattern in ocean waters. <i>Professor John Largier</i>

Refreshments
10:50-11:15

Session 2: Economic Energy	
11:15-11:45	Resilience concepts for complex systems exemplified at socio-technical systems like power grids. <i>Professor Ulrike Feudel</i>
11:45-12:05	The impact of ignorant environmental management on a business. <i>Mr Charles Fourie</i>
12:05-12:25	Legal diversity and biodiversity in the African maritime domain. <i>Professor Patrick Vrancken</i>

Lunch & Drone Display
12:25-13:15

Afternoon Sessions

Time

Item

Session 3: Social Signals

13:15-13:45	Pre-colonial sites along the coast of Eastern Cape and practices of cultural re-appropriation. <i>Dr Magda Minguzzi</i>
13:45-14:05	Sustainable fisheries: Bridging the gap between legislation and implementation. <i>Ms Danai Tembo</i>
14:05-14:25	Dependence of coastal communities in the Western Indian Ocean on marine ecosystems: Impacts of climate change and the future! <i>Professor Mike Roberts</i>
14:25-14:45	Access to the coastal and marine tourism industry. <i>Dr Lynn Jonas</i>

Refreshments
14:45-15:00

Session 4: Management Marvels

15:00-15:30	A wishlist for adaptive conservation strategies. <i>Dr Dario Fiorentino</i>
15:30-15:50	The Shallow Marine and Coastal Research Infrastructure: A model for Coastal and Marine ILTER sites (ILTER-CMS). <i>Professor Tommy Bornman</i>
15:50-16:10	Estuary science and management: Implications for the future. <i>Professor Janine Adams</i>
16:10-16:30	Celebrating South Africa's 20 new Marine Protected Areas. <i>Professor Mandy Lombard</i>
16:30-16:50	Seabirds as ocean sentinels. <i>Professor Pierre Pistorius</i>
16:50-17:00	Closing Address <i>Dr Bernadette Snow: Director Institute for Coastal and Marine Research</i>

Cheese & Wine Function
17:00-19:00

International Guests



Professor Ulrike Feudel

*Institute for Chemistry and Biology of the Marine Environment
University of Oldenburg*

Research Interests: food web models, harmful algal blooms, dynamic systems, nonlinear dynamics and systems, bifurcation analysis, chaos theory, pattern formation, mathematical modelling.



Dr Dario Fiorentino

*Helmholtz Institute for Functional Marine Biology
University of Oldenburg*

Research Interests: spatial planning and analysis, biodiversity, conservation, ecosystem ecology, evolution, species diversity.



Professor Helmut Hillebrand

*Institute for Chemistry and Biology of the Marine Environment
University of Oldenburg*

Research Interests: plankton ecology, biodiversity, ecosystem functioning, ecological stoichiometry, competition predator-prey interactions.



Professor John Largier

*Coastal and Marine Sciences Institute
University of California, Davis*

Research Interests: plankton, turbidity, near shore processes, larvae transport, dissolved organic matter, estuaries, coastal oceanography.

Local Speakers

Professor Janine Adams

*SARChI Shallow Water Ecosystems & Department of Botany
Nelson Mandela University*

Research Interests: integrated ecosystem functioning, estuarine ecology, blue carbon ecosystems, conservation management, coastal zone management.



Professor Tommy Bornman

*Elwandle Coastal Node
South African Environmental Observation Network (SAEON)*

Research Interests: marine ecology and biology, biological oceanography, hydrology, estuaries.



Dr Shaun Deyzel

*Elwandle Coastal Node
South African Environmental Observation Network (SAEON)*

Research Interests: coastal and community ecology, climate change, species diversity, plankton ecology, community dynamics.



Mr Charles Fourie

*EcoSat Water Management
Specialist Environmental Solutions Engineer*

Research Interests: carbon energy, chemical engineering, environmental science, hydrology, environmental accounting.





Dr Phumelele Gama
*Department of Botany
Nelson Mandela University*

Research Interests: aquatic plant ecology, phytoplankton ecology, wetlands, estuaries.



Dr Lynn Jonas
*Department of Tourism
Nelson Mandela University*

Research Interests: environmental education, marine tourism, teaching, curriculum and professional development.



Professor Mandy Lombard
*SARChI Marine Spatial Planning
Nelson Mandela University*

Research Interests: marine conservation, marine spatial planning, conservation planning, system dynamics, GIS.





Dr Magda Minguzzi
*School of Architecture
Nelson Mandela University*

Research Interests: indigenous knowledge, art, design, landscape architecture.



Professor Pierre Pistorius
*Marine Apex Predator Research Unit (MAPRU) & Department of
Zoology
Nelson Mandela University*

Research Interests: conservation biology, conservation, marine apex predators, biodiversity monitoring, climate change.



Dr Gavin Rishworth
*Department of Zoology
Nelson Mandela University*

Research Interests: marine ecology, evolution, geobiology, palaeoecology, stable isotope ecology.





Professor Mike Roberts

*SARChI Ocean Science and Marine Food Security
Nelson Mandela University*

Research Interests: physical and coastal oceanography, ocean currents and circulation, oceanographic instrumentation, fisheries, ecosystem functioning.



Dr Gavin Snow

*School of Animal, Plant and Environmental Sciences
University of the Witwatersrand*

Research Interests: water quality, marine and aquatic ecology, ecosystem ecology, rivers.



Ms Danai Tembo

*Department of Development Studies
Nelson Mandela University*

Research Interests: marine social governance, climate change adaptation, social science.



Professor Patrick Vrancken

*SARChI Law of the Sea and Development in Africa
Nelson Mandela University*

Research Interests: law of the sea, law and legal studies, legal analysis, ocean governance, legislation, international law.

Notes

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