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Amr Salama

Bologna University



👤 Personal Statement

Oceanography researcher and a PhD student at the Department of Physics and Astronomy, Bologna University. In the third year of my PhD project which is about " Investigating the spatial and temporal dynamics of the biogeochemical processes in the Benguela upwelling system, using a coupled physical-biogeochemical modelling approach ".

🎓 Education

- **PhD in "Future earth, climate change and societal challenges " 36th cycle** 2020 - Now
Department of Physics and Astronomy,
Bologna University, Italy.
 - **Thesis provisional title:** Investigating the spatial and temporal dynamics of the biogeochemical processes in the Benguela upwelling system.
 - **Advisors:** Prof. Marco Zavatarelli | Dr. Momme Butenschön | Dr. Tomas Lovato
- **Master of Science in Environmental Studies-Physical Sciences** 2013 – 2018
Department of Environmental Studies,
Institute of Graduate Studies and Research, Alexandria University, Egypt.
 - **Thesis Title:** Nitrogen dynamic modeling in the marine environment off lake Idku outlet, Abu Qir bay.
 - **Advisors:** Prof. Samir M. Nasr | Prof. Ahmed E. Rifaat
- **Bachelor of Science in General Oceanography** 2008 – 2012
Department of Oceanography, Faculty of Science, Alexandria University, Egypt.
 - **Cumulative Grade point average (GPA): 3.1** out of 4 (≈ **Very Good**).

🔍 Research fields

- Numerical modelling application for understanding the interactions between oceanographic physical processes and marine biogeochemistry.
- Producing climate change projections of variables affecting marine biogeochemical cycles.
- Nutrients exchanges at sediment – water interface.
- Seawater quality monitoring via laboratory analyses and remote sensing techniques.

👛 Research experience

- Designed a coupled physical-biogeochemical model for studying past and future changes in the Benguela upwelling system, within the framework of the PhD project.
- Accomplished M.Sc. dissertation work through developing a highly resolved coupled hydrodynamic – water quality model to investigate nitrogen dynamics in an estuarine system.
- Evaluated coastal water quality along the Egyptian Mediterranean coast.

👤 Teaching experience

- **Research assistant** 2013 – 2020
Department of Environmental Studies, Institute of Graduate Studies and Research, Alexandria University, Egypt.
 - Provided assistance to the department staff with classrooms instructions and preparation of teaching materials related to environmental science, in addition to laboratory analyses work.

- **Numerical modeling Instructor** 2018 - 2020
Alexandria Research Center for Adaptation to Climate Change, Alexandria, Egypt.
 - Held 2 workshops about usage of **Delft3D** modeling suite for developing hydrodynamics, tidal, and water quality models.

Projects

- **Monitoring of Coastal Water Quality along the Egyptian Mediterranean Coast** 2013 - 2020
Institute of Graduate Studies and Research, Alexandria University, Egypt.
 - Conducting field cruises to collect water and sediments samples along the coast.
 - Laboratory analysis work, in addition to data interpretation and statistical analyses.

Funding

- **Funding for M.Sc. dissertation research work**
Funding Agency: Egyptian Science & Technology Development Fund (STDF), Cairo, Egypt.

Workshops and training courses

- **EuroSea/OceanPredict workshop on "Ocean Prediction and Observing System Design"** 29 June -
1 July 2022
Met Office, Exeter, United Kingdom.
 - **Abstract title:** Past and future changes in the Benguela upwelling system with global warming.
- **CLIVAR-FIO Summer School on " Past, Present and Future Sea Level Changes & UNESCO IOC-ODC Training Course on Ocean Forecast System "** 25 June -
7 July 2018
The First Institute of Oceanography (FIO), Qingdao, China.
 - **Awarded the best trainee.**
- **Training Programme on Regional Ocean Governance for the Mediterranean, Black, Baltic & Caspian Seas.** 6 Nov -
8 Dec 2016
International Ocean Institute (IOI), University of Malta, Malta.

Conference papers

- **Modelling of the biogeochemical cycle and dispersion of nitrogen off Lake Idku outlet, Abu Qir bay, Egypt.** 3 - 7 Sep
2018
Samir Nasr, Ahmed Rifaat, **Amr Salama**
Conference: Ocean Deoxygenation: Drivers and Consequences. Past. Present. Future.
Kiely University, Germany.
- **A modelling approach to investigate the biogeochemical cycle of nitrogen and the spatial dispersion in an estuarine system.** 7 - 11 Oct
2019
Samir M. Nasr, **Amr T. Salama**, Ahmed E. Rifaat
Conference: 42nd CIESM Congress
Cascais, Portugal.








Study abroad

- **Visiting scholar at Virginia Institute of Marine Science, USA.** Sep - Dec
2018
Supervisor: Dr. Mark J. Brush
 - Applied a hybrid empirical-mechanistic eutrophication and hypoxia model for an Egyptian shallow marine ecosystem.
 - Attended "**Ecosystem Modeling**" course, which provides an overview of quantitative modeling for marine ecosystems, with an emphasis on developing mechanistic models of biogeochemical cycles.

Modelling and programming Skills



Languages

 Arabic: Native Language	 English: IELTS with Overall score 6.5 (B2)	 Italian: A2 Level
	Listening 6.5	
	Reading 6.5	
	Writing 5.5	
	Speaking 7.5	

References

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