



Meet our Research Faculty

# Dr. Haifa Ben-Romdhane

Assistant Professor – Visiting Faculty



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**Name:** Dr. Haifa Ben-Romdhane

**Title:** Assistant Professor – Visiting Faculty

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## Research Interests

Advances in remote sensing instrumentation, data availability, and processing methods

Space-borne SAR remote sensing for archaeological applications

Oceanographic applications of SAR remote sensing

Assessment and monitoring of marine and extreme environments using observation systems and statistical analysis

Application of remote sensing in environmental monitoring and climate change topics

Remote sensing of the atmosphere of Mars

Advanced remote sensing for Martian studies

Data analytics and machine learning

Geospatial data analysis

Satellite image processing

Acoustic image processing

Echo sounding and LiDAR Remote Sensing for hydrographic surveying and mapping

Spectral-spatial methods for classification

Automatic change detection

Object-based image analysis

Marine ecology

Environmental data analysis and modelling

Natural resources management and sustainable development

## Research Collaborations

She has participated in several collaborative research studies, projects and activities along with researchers and scientists from the Atmosphere and Ocean Research Institute, University of Tokyo, Tokyo, Japan, Masdar Institute of Science and Technology, Abu Dhabi, UAE, Khalifa University, Abu Dhabi, UAE Environment Agency – Abu Dhabi, UAE, etc.

## Publications

### Journal and Conference Articles

Ben-Romdhane, H., Jabado, R.W., Grandcourt, E.M., Perry, R.J.O., Al Blooshi, A.Y., Marpu, P.R., Ouarda, T.B. and Ghedira, H., 2020. Coral Reefs of Abu Dhabi, United Arab Emirates: Analysis of Management Approaches in Light of International Best Practices and a Changing Climate. *Frontiers in Marine Science*, 7, p.541.

- Ben-Romdhane, H., Ouarda, T.B., Marpu, P., Rajan, A., Bugla, I., Perry, R.J. and Ghedira, H., 2020. Studying coral reef patterns in UAE waters using panel data analysis and multinomial logit and probit models. *Ecological Indicators*, 112, p.106050.
- H Ben-Romdhane, MA Al-Musallami, PR Marpu, TBMJ Ouarda, H Ghedira, 2018. Studying the impact of El Niño 2015-2016 on a coral reef environment in UAE using remote sensing. *International Journal of Remote Sensing*. In press.
- H Ben-Romdhane, 2017. Data and infrastructure in marine environment for an efficient management and sustainability. *Marine Data Infrastructure GCC*. 30-31 January 2017. Dubai, UAE.
- H Ben-Romdhane, PR Marpu, TBMJ Ouarda, H Ghedira, 2016. Corals & benthic habitat mapping using DubaiSat-2: a spectral-spatial approach applied to Dalma Island, UAE (Arabian Gulf). *Remote Sensing Letters* 7 (8), 781-789.
- N Beegum, H Ben-Romdhane, MT Ali, P Armstrong, H Ghedira, 2016. Optical and Radiative Properties of Aerosols over Abu Dhabi in the United Arab Emirates. *Journal of Earth System Science* 125 (8), 1579-1602.
- H Ben-Romdhane, PR Marpu, H Ghedira, TBMJ Ouarda, 2016. Mapping of coral reef environment in the Arabian Gulf using multispectral remote sensing. WG VIII/9 - Coastal and Ocean Applications. XXIII International Society For Photogrammetry and Remote Sensing (ISPRS) Congress. 12-19 July, 2016. Prague, Czech Republic.
- H Ben-Romdhane, MA Ahmed, PR Marpu, T Ouarda, S Sanchez, H Ghedira, 2016. Change detection in a coral reef environment in the Arabian Gulf using multispectral remote sensing. 13th International Coral Reef Symposium. 19-24 June 2016. Honolulu, Hawaii.
- H Ben-Romdhane, PR Marpu, H Ghedira and TBMJ Ouarda, 2016. Mapping of Coral Reef Environment in the Arabian Gulf Using Multispectral Remote Sensing. UAE Graduate Studies Research Conference 2016. 20-22 Mar, 2016. UAEU, Al Ain, Abu Dhabi, UAE.
- H Ben-Romdhane, 2016. Remote Sensing & Modelling of coral reefs in the Arabian Gulf: Role of science & research in support of coral reef management & sustainability. *Marine Data Infrastructure GCC*. 15-16 February 2016. Dubai, UAE.
- N Beegum, H Ben-Romdhane, H Ghedira. 2013. Aerosol Direct Radiative Forcing and Forcing Efficiencies at Surface from the shortwave Irradiance Measurements in Abu Dhabi, UAE. *AGU Fall Meeting Abstracts* 1, 0042.
- H Ghedira, H Ben-Romdhane, N Beegum. 2013. Temporal variability of air-pollutants over Abu Dhabi, UAE. *AGU Fall Meeting Abstracts* 1, 0040.
- H Ben-Romdhane, J Zhao, H Ghedira. 2013. Assessment of atmospheric correction models for ocean colour applications through dusty atmospheres: Case of the Arabian Gulf. *AGU Fall Meeting Abstracts* 1, 1550.
- H Ben-Romdhane, I Hamadeh, M Jayyousi, M Al Ateibi. Effects of Asymmetric Information on Bid Prices in the Online Auction Markets. *International Conference On Applied Economics (ICOAE 2013)*. Bahçeşehir University Istanbul, Turkey 27-29 June, 2013.
- T Komatsu, T Sagawa, H Ben-Romdhane, et al., 2008. Utilization of ALOS AVNIR-2 data for mapping coastal habitats: Examples of seagrass beds from boreal to tropical waters. *ESA Special Publication* 664.
- T Komatsu, T Sagawa, E Boisnier, K Ishida, H Ben-Romdhane, T Belsher, Y Sakanishi, MIS Mohd, 2007. Utilization of ALOS data for conserving coastal ecosystems and managing fisheries activities—Example of seagrass beds in Akkeshi Lake, Hokkaido, and aquaculture facilities in Yamada Bay, Sanriku Coast, Japan. *The First Joint PI Symposium of ALOS Data Nodes for ALOS Science Program in Kyoto, Kyoto, Japan*.
- T Komatsu, T Sagawa, H Ben-Romdhane, et al., 2007. Utilization of ALOS Data for Mapping Coastal Habitats and Fishing Activities in Asia. *Jaxa Repository*.

## **Affiliations**

Emirati Society of GIS and Remote Sensing (ESGRS)

International Society for Reef Studies

IEEE Membership, IEEE Young Professionals, IEEE Geoscience and Remote Sensing Society

SPIE The International Society for Optics and Photonics