



PERSONAL INFORMATION

Name **Zaaboub, Nouredine**
Address 28, rue du 2 mars 1934, 2025, Salammbô, Tunis, Tunisia
Telephone +21653 826 718
Fax +216 71 732 622
E-mail Nouri.zaaboub@gmail.com
Nouredine.Zaaboub@instm.rnrt.tn
Nationality Tunisian
Date of birth 29.11.1970

WORK EXPERIENCE

- Dates (from – to) 2007-2017
 - Name and address of employer *National Institute of marine Sciences and Technologies (INSTM) Tunisia*
 - Type of business or sector Permanent Researcher
 - Occupation or position held Laboratory of marine science
 - Main activities and responsibilities Geochemical research
- 1997-2006
Ministry of Education
Environmental Science Professor
Environmental Science
Teaching

EDUCATION AND TRAINING

- Dates (from – to) 1989-1990
 - Name and type of organisation providing education and training high school of Sousse
 - Principal subjects/occupational skills covered Diploma of High school diploma Math Sciences
 - Title of qualification awarded Bachelor degree
 - Level in national classification (if appropriate) (1990-1995)
University of science of Tunisia
- Diploma of high education
Geology, environmental science
Higher education
(1995-1997)

University of Science of Tunis II, Tunisia

Master degree

Environmental Science: Geochemical Palenvironmental indicators

(1999-2006)

University of Science of Tunis II, (Tunisia) and the university of Granada (Spain)

PhD. Thesis

Environmental geochemistry: Geochemistry of fibrous clay (palygorskite and sepiolite)

(1016-2017)

University habilitation in geological sciences: Bio-géochimie des sédiments marins côtiers dans le nord de la Tunisie : Echanges des nutriments et des métaux

PERSONAL SKILLS AND COMPETENCES

MOTHER TONGUE

ARAB, FRENCH

OTHER LANGUAGES

ENGLISH

- Reading skills
- Writing skills
- Verbal skills

good
good
good

TEACHING, RESEARCH SKILLS AND COMPETENCES

- Marine pollution
- nutrients cycle
- phosphorous cycle
- Benthic flux
- Metals bioavailability and toxicity
- Marine environmental geochemical processes

[My current works are focused on biogeochemical changes affecting marine environment due to anthropological activities and climate change. Water and sediments quality are investigated such as mineralogical and geochemical identification of major and trace elements fractionation in marine environments, lagoons and rivers.

Current interest is related influence of mining rejects discharges on marine environment. Evaluation of the toxicity in the marine environment by various geochemical and biotest methodology.

Other works in related with environmental biogeochemical change in costal lagoon; it is about the characterization and the biogeochemical modeling of a Mediterranean Lagoon with the aim of a sustainable development.]

ORGANISATIONAL SKILLS AND COMPETENCES

(2013-2014)

Expertise of articles review in Elsevier's journals (Clay minerals journal, Journal of African Earth Sciences...)

(2013-2014)

Expertise of International Cooperation scientific projects (CMCU), this is an evaluation of Tuniso-European projects (Tuniso-Française).

(2009-2012)

International Cooperation project Manager between: Tunisia (National Institute of Marine Science and Technology) and Portugal with the University of Aveiro.(48/TP/09)

Title of the project: "Characterization and Biogeochemical Modeling of a Mediterranean Lagoon: case of Bizerte Lagoon (Tunisia)."

The aim of this project is to evaluate phosphorous control and comparison in the lagoon and in the outside of the lagoon in Mediterranean sea that seems to be necessary for better understanding the phosphorous contribution in all Mediterranean sea phosphorous cycle.

(2007-2009)

International Cooperation project Manager between: Tunisia (National Institute of Marine Science and Technology) and Spain with the University of Granada.

Title of the project: "The impact of mining discharges in the Medjerda River in the North of Tunisia on the marine environment (Gulf of Tunis)".

This project aim is to evaluate the impact of sediment contamination on the ecology of the gulf of Tunis and elucidate the sources of environment degradation.

(2010-2013)

Member of International Mediterranean GEOTRACE group participate to international project: Dutch GEOTRACES project in the Mediterranean and Black Sea.

GEOTRACES aims to improve our understanding of biogeochemical cycles and large-scale distribution of trace elements and isotopes in the marine environment and establish the sensitivity of these distributions to changing environmental conditions. The objective is to elucidate important biogeochemical processes, sources and sinks that determine the distribution of bio-essential and other trace elements in the Mediterranean Sea and Black Sea. My contribution is concerning surface sediment sampling and sediment analysis.

(2016-2017)

Participation in a Course on Measurements of Carbonate Chemistry Parameters in Seawater in the Context of Ocean Acidification. (International Atomic Energy Agency Technical Cooperation Project RAF7014), Accra, Ghana.

- Applying Nuclear Analytical Techniques to Support Harmful Algal Bloom Management in the Context of Climate and Environmental Change, Phase II
- The purpose of the course is to get a theoretical overview of ocean chemistry and more specifically of the ocean carbonate chemistry in connection with the growing concern related to ocean acidification. Lectures on pH, pCO₂ and Dissolved inorganic carbon will be given, and hands-on sessions on sampling and basic pH and alkalinity measurements will be realized in the context of seawater monitoring programme.

(20118-2019)

- Course and training course teaching (16-06-2018 to 24-06-2018)
- Training on marine biogeochemistry and standardization of analytical methods between the north and south of the Mediterranean:
- Training of student and teacher researchers in the field of sampling and analysis in the transmediterranean oceanographic field particularly marine biogeochemistry.

(2016-2019)

For national project of our institution : national institute of marine science and technology I participate in following projects:

- Different aspect of equilibrium in Ichkeul Lake and Bizerte Lagoon : hydrodynamic and

- pollution
Contamination and bioremediation of marine environment in gulf of Gabes

(2010-2019)
GEOTRACES national representative for Tunisia

TECHNICAL SKILLS AND COMPETENCES

publications

Sheppard C. (2019) World Seas: An Environmental Evaluation, Volume I: Europe, The Americas and West Africa, Second Edition. Elsevier, 892p.

Oueslati W., Helali M.A., Mensi I., Bayaoui M., Touati H., Khadraoui A., **Zaaboub N.**, Added A., Aleya L. (2018). How useful are geochemical and mineralogical indicators in assessing trace metal contamination and bioavailability in a post-restoration Mediterranean lagoon?. Environmental Science and Pollution Research. <https://doi.org/10.1007/s11356-018-2575-0>

Amri S., **Zaaboub N.**, Oueslati, W., (2018) Recent Advances in Environmental Science from the Euro-Mediterranean and Surrounding Regions: Trace Metals Accumulation in Surface Sediments of the Gulf of Gabès, Tunisia: Usefulness of Metal Sediment Fractionation, pp.1687-1689.

Shaiek M., **Zaaboub N.**, Ayas D., Alves Martins M.V., Romdhane M.S. (2018). Crabs as Bioindicators of Trace Element Accumulation in Mediterranean Lagoon (Bizerte Lagoon, Tunisia). Journal of Sedimentary Environments, 3 (1).

DOI: <https://doi.org/10.12957/jse.2018.32950>

Alves Martins MV., **Zaaboub N.**, El Bour M., Kaminski MA., Frontalini F. (2017) Spirobolivina papillosa and Spirobolivina Retorta, two new foraminiferal morphospecies from the Bizerte Lagoon (Tunisia) .Journal of Foraminiferal Research, 47, 1: 92–99.

Oueslati, W., Helali, M.A., **Zaaboub N.**, Sebei, A., Added, A., Aleya, L. (2017) Sulfide influence on metal behavior in a polluted southern Mediterranean lagoon: implications for management. Environ Sci Pollut Res., DOI: 10.1007/s11356-017-0529-6.

Ben Mna, H., Oueslati, W. Helali, M.A., **Zaaboub N.**, Added, A., Aleya L. (2017). Distribution and assessment of heavy metal toxicity in sediment cores from Bizerte Lagoon, Tunisia. Environ Monit Assess 189:356. DOI 10.1007/s10661-017-6073-5.

Alves Martins MV., **Zaaboub N.**, El Bour M., Kaminski MA., Frontalini F. (2017) Spirobolivina papillosa and Spirobolivina Retorta, two new foraminiferal morphospecies from the Bizerte Lagoon (Tunisia) .Journal of Foraminiferal Research, 47, 1: 92–99.

Oueslati, W., **Zaaboub N.**, Helali, M.A., Ennouri, R., Martins, M.V.A., Dhib, A., Galgani, F., El Bour, M., Added, A., Aleya, L. (2017). Trace element accumulation and elutriate toxicity in surface sediment in northern Tunisia (Tunis Gulf, southern Mediterranean). Marine Pollution Bulletin, DOI:10.1016/j.marpolbul.2016.12.076.

Zaaboub N., Helali M.A., Alves Martins M.V., Ennouri R., B. Béjaoui, da Silva E.F., El Bour M., Aleya L. (2016). Assessing pollution in a Mediterranean Lagoon using acid volatile sulfides and

estimations of simultaneously extracted metals. *Environmental Science and Pollution Research*. DOI 10.1007/s11356-016-7431-5.

Alves-Martins M.V., Souza Pinto A.F., Nogueira L., Machado M.C., Mattos Laut L.L., Frontalini F., **Zaaboub N.**, da Conceição Rodrigues M.A., F. Rocha. (2016). Benthic foraminiferal response to environmental stress caused by physicochemical parameters and pollution in the Aveiro City canals (Portugal) *Estuarine, Coastal and Shelf Science*

-Helali M.A., Oueslati W., **Zaaboub N.**, Added A, Aleya L. (2016). Bioavailability and assessment of heavy metal pollution in sediment cores off the Mejerda River Delta (Gulf of Tunis): How useful is a multiproxy approach?. *Marine Pollution Bulletin*. doi.org/10.1016/j.marpolbul.2016.02.027.

- Helali M.A., Oueslati W., **Zaaboub N.**, Added A, Aleya L. (2016). Chemical speciation of Fe, Mn, Pb, Zn, Cd, Cu, Co, Ni and Cr in the suspended particulate matter off the Mejerda River Delta (Gulf of Tunis, Tunisia). *Journal of African Earth Sciences*. DOI:10.1016/j.jafrearsci.2016.02.013.

- Alves-Martins M. V., Helali M.A., **Zaaboub N.**, Boukef-Ben Omraned I., et al. (2016). Organic matter quantity and quality, metals availability and foraminiferal assemblages as environmental proxy applied to the Bizerte Lagoon (Tunisia). *Marine Pollution Bulletin*. doi.org/10.1016/j.marpolbul.2016.02.032.

-Helali M.A., **Zaaboub N.**, Oueslati W., Added A., Aleya L., (2016). Nutrient exchange and oxygen demand at the sediment–water interface during dry and wet seasons off the Medjerda River Delta (Tunis Gulf, Tunisia). *Environ. Earth Sci.*, DOI 10.1007/s12665-015-4820-x

-Martins, M.V.A., Dardon, U., Frontalini, F., Silva, E.F., **Zaaboub N.**, Jones, C.M., Pereira, E., Bergamaschi, S., Dias, J.A., Rocha, F., (2016). Rare Earth Elements used as fingerprints of differentiated sediment sources in the Ria de Aveiro (Portugal). *Journal of Sedimentary Environments*, 1(1): 17-42.

-Ennouri R., **Zaaboub N.**, Fertouna-Bellakhal M., Chouba L., Aleya L. (2015). Assessing trace metal pollution through high spatial resolution of surface sediments along the Tunis Gulf coast (southwestern Mediterranean). DOI: 10.1007/s11356-015-5775-x.

-Helali M.A., **Zaaboub N.**, Oueslati W., Added A., Aleya L., (2015). Oxygen consumption and nutrient fluxes in coastal marine sediments off the Mejerda River delta (Gulf of Tunis). *Mediterranean Marine Science*. 16(3), 636-643.

- **Zaaboub N.**, Alves Martins M.V., Dhib A., Béjaoui B., Galgani F., El Bour M., Aleya L. (2015). Accumulation of trace metals in sediments in a Mediterranean Lagoon: Usefulness of metal sediment fractionation and elutriate toxicity assessment. *Environmental Pollution*, 207, 226–237.

-Alves Martins MV, **Zaaboub N.**, Aleya L, Frontalini F, Pereira E, Miranda P, et al. (2015). Environmental Quality Assessment of Bizerte Lagoon (Tunisia) Using Living Foraminifera Assemblages and a Multiproxy Approach. *PLoS ONE* 10(9): e0137250. doi:10.1371/journal.pone.0137250.

-Helali M.A., **Zaaboub N.**, Oueslati W., Added A., Aleya L., (2015). Diagenetic processes and sediment–water exchanges of heavy metals in the Mejerda River Delta (Gulf of Tunis). *Environ.*

- Zaaboub N.**, Ounis, A., Helali M.A., Béjaoui B., Lillebø A.I., da Silva E.F., Aleya L., (2014). Phosphorus speciation in sediments and assessment of nutrient exchange at the water-sediment interface in a Mediterranean lagoon: Implications for management and restoration. *Ecological Engineering*, 73,115-125.
- **Zaaboub N.**, Oueslati W., Helali M.A., Abdeljaoued S., Huertas F. J., López-Galindo A., (2014). Trace element in different marine sediment fractions of the gulf of Tunis: central Mediterranean sea. *Chemical Speciation And Bioavailability*, 26 (1), 1-12.
- Alves Martins M.V., Frontalini F., Laut L.L.M., Silva F.S., Moreno J., Sousa S., **Zaaboub N.**, El Bour M., Rocha F. (2014). Foraminiferal biotopes and their distribution control in Ria de Aveiro (Portugal): a multiproxy approach. *Environ Monit Assess* DOI 10.1007/s10661-014-4052-7
- Helali M.A., Oueslati W., **Zaaboub N.**, Added A., Abdeljaoued S., (2013) geochemistry of marine sediments in Mejerda river Delta, Tunisia. *Chemical Speciation and Bioavailability*, 25(4). Doi: 10.3184/095422913X13840098160825.
- **Zaaboub N.**, Ounis A., Da Silva E. A. F. (2012) Sedimentary Phosphorus Fractionation in Central Mediterranean Marine Sediments (North Tunisia). 15th Biennial Challenger Conference for Marine Sciences, 3-6 September 2012, University of East Anglia.
- Zaaboub N.**, Oueslati W., Abdeljaoued S., Huertas F. J., López-Galindo A. (2010). Trace element in different marine sediment fractions of the Gulf of Tunis : Central Mediterranean sea. GEOTRACES Mediterranean Planning Workshop, 03-06 Octobre, Nice, France.
- Béjaoui B., Ferjani D., **Zaaboub N.**, Chapelle A., Moussa M. (2010) Caractérisation hydrobiologique saisonnière de la lagune de Bizerte (Tunisie) . *Revue des Sciences de l'Eau* , Vol. 23 , n° 3 , pp 215-231.
- Zaaboub N.**, Abdeljaoued S., Huertas F. J., López-Galindo A. (2010). Mineral distribution in the Gulf of Tunis superficial sediments. XIV International Clay Conference.14-20 June 2009. Castellaneta Marina. Italy.
- Zaaboub N.**, Abdeljaouad S., López-Galindo A. (2007). Stable isotope geochemistry of carbonates and fibrous clays in Tunisian Tertiary continental deposits. *EUROCLAY 2007*, Abstract book (ISBN 978-972-789-236-5), 146. Aveiro (Portugal), 22-27 Julio 2007
- Zaaboub N.**, Abdeljaouad S., López-Galindo A. (2007). Micromorphology of fibrous clays of Tunisian continental Tertiary sediments. *EUROCLAY 2007*, Abstract book (ISBN 978-972-789-236-5), 111. Aveiro (Portugal), 22-27 Julio 2007
- Zaaboub N.**, Abdeljaoued S., López-Galindo A. (2005). Origin of fibrous clays in Tunisian Paleogene continental deposits. *Journal of African Earth Sciences* 43, 491–504.

OTHER SKILLS
AND COMPETENCES

(2011-2012)
workshop organizer «les lagunes de Thau et Bizerte entre pressions environnementales et gestion durable».

