
CURRICULUM VITÆ
BACKGROUND AND PERSONNEL INFORMATION

1. CURRICULUM VITAE.....	1
1.1. Short biography.....	1
1.2. Professional experience.....	2
1.3. Education.....	2
2. TEACHING ACTIVITIES.....	2
2.1. Contents and practices.....	2
2.2. Tutoring and follow-up of students.....	6
3. PROJECT LEAD / RESEARCH PROPOSALS.....	8
4. ACHIEVEMENTS AND AWARDS.....	9
5. INVITED TALKS AND PANELS.....	10
6. JOURNAL REVIEWER.....	11
7. PUBLICATIONS AND CONFERENCE CONTRIBUTIONS.....	12
7.1. Peer-reviewed articles.....	12
7.2. Conference proceedings / contributions.....	14
7.3. Reports.....	17
8. TRANSFERABLE SKILLS AND COURSES UNDERTAKEN.....	17

1. CURRICULUM VITAE



Born July 19, 1980 (42 years old), married, three children

Associate-professor of Hydrogeology

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ResearcherID: <http://www.researcherid.com/rid/C-7306-2008>

Scopus Author ID: <https://www.scopus.com/authid/detail.uri?authorId=36834736300>

ResearchGate: https://www.researchgate.net/profile/Adel_Zghibi

Google scholar: <https://scholar.google.fr/citations?user=4b4oDJ0AAAAJ&hl=fr&oi=ao>

Publons – Web Of Sciences Researcher ID: ABD-6341-2020 :

<https://publons.com/dashboard/summary/>

1.1. Short biography

Adel ZGHIBI has obtained his PhD degree in Rural Engineering, Water and Forest in 2013 from the National Agronomic Institute of Tunisia (INAT) and the University Habilitation of Geology in 2021 from the Faculty of Sciences of Tunis. He is an Associate-professor of Hydro(geo)logy at the Faculty of Sciences of Tunis, Department of Geology, University Tunis El-Manar since September 2014. His research is mainly focused on modelling flow and mass transport processes in heterogeneous porous and fractured media. Dr. A. Zghibi has a broad experience in teaching groundwater hydrology, groundwater modelling, catchment hydrology and process understanding for hydrological applications. He is author of several scientific papers refereed in international journals and articles on journals, book chapters, specialized monographs and proceedings about hydrology and water engineering and is reviewer of several international journals. He has lead a large international project on the groundwater resources management, funded by the international organisations (NAS, USAID, EU, Erasmus...).

His research interest, as mentioned below, is of an interdisciplinary nature within the hydrological Sciences, contributing to preserve the groundwater resources, remediate and mitigate the spread of pollution such as:

- Analysis and modelling of hydrological systems,
 - Catchment hydrology and process understanding,
 - Model identification and evaluation,
 - Numerical Groundwater Modelling,
-

- Impacts of environmental change (land use, climate and population) on water resources,
- Improved prediction of floods and droughts,
- Food-Energy-Water nexus, sustainable socio-ecological systems, and sustainable development,...

1.2. Professional experience

Since 2022 Associate professor of Higher Education at the Faculty of Sciences of Tunis; Specialty: Hydrogeology.

Since 2014 Assistant Professor of Higher Education at the Faculty of Sciences of Tunis; Specialty: Hydrogeology.

2010.2014 Assistant of Higher Education at the High Institute of Technology of Environment and Civil Engineering of Tunis, ISTEUB, Tunisia; Specialty: Hydraulic Engineering and Water Resources.

1.3. Education

2021 University Habilitation : specialty Geology

Faculty of Sciences of Tunis, Department of Geology, University Tunis El-Manar

Dissertation: *“Towards a Sustainable and Adaptive Groundwater Management: An Overview of Concepts, Challenges and Applications”*

Habilitation defence date : 07 April 2021

Habilitation committee:

M. Dlala (FST, Tunisia),	President
H. Gabtni (CERTe, Tunisia),	Reporter
Y. Hamed (FSG, Tunisia),	Reporter
M. Zammouri (FST, Tunisia)	Examinator
A. Mabrouk (FST, Tunisia),	Examinator

2013 Ph.D., Agronomic Sciences (Rural Engineering, Water and Forest, Doctor),

National Agronomic Institute (INAT, Tunisia)/UniLaSalle Beauvais (ULB, France).

Dissertation: *“Numerical Groundwater Modeling of Complex Aquifers (France-Tunisia): Geophysical, Geochemical and Numerical Approaches”*

Thesis defence date : 13 March 2013

Ph.D. Thesis evaluation committee:

K. Zayani (INAT, Tunisia),	President
J. Tarhouni (INAT, Tunisia),	Thesis Director
L. Zouhri (ULB, Beauvais, France),	co-Thesis Director
A. Larabi (Mohammadia School of Engineering, Rabat, Maroc)	Jury Member
N. Gaaloul (INRGREF, Tunisia),	Jury Member
Y. Zahar (ISTEUB, Tunisia),	Jury Member

- 2007 **Master** of Hydraulic Engineering and Water Management, INAT. Thesis : *“A modelling study of seawater intrusion in the Korba coastal plain, Tunisia”*
- 2004 **Engineer's degree** of Rural Engineering, Water and Forests, INAT. Thesis : *“Water quality assessment of waste-water surface constructed wetland, Tunisia”*

2. TEACHING ACTIVITIES

2.1. Contents and practices

My primary objective as a hydrogeologist is to apply my knowledge in geology to perform investigative work that would aid and lead to solving groundwater problems, which will ultimately fulfill the faculty's core goals.

I believe that our most important objectives as educators in the field of environmental geology and hydrogeology is to raise the students' appreciation for the natural environment and increase their understanding of their personal role in its preservation. Students need a sound understanding of the basics of the flow and transport of contaminants in the field of hydrogeology. At the same time, I would like to introduce them to science in general, helping them to observe how new discoveries are made, emphasizing how important it is to have an open, but critical, and inquiring mind.

Furthermore, I aimed to help student to gain the knowledge and to plan count measures against Water Resources Management issues by applying the concept of Integrated Water Resources Management and Groundwater Modelling concept. The water management theme will help them to integrate the knowledge and understanding of water developed in the other thematic areas to better enable to tackle the big water management challenges that we face, especially in Tunisia. In addition, in a world of rapidly changing global and climatic conditions, geoscientists and especially hydrogeologists are under increasing pressure to provide solutions in terms of sustainable water supply. Therefore, our teaching has to include these global aspects while focusing on particular projects in different parts of the world.

Furthermore, within the teaching program Faculty, there is a large demand for education in the field of hydraulic infrastructure, fluid mechanics, and underground hydraulics. These fields' covers applications such as flood defences, breakwaters, dams, barriers, quay walls, tunnels, etc. A combination of disciplinary knowledge (hydraulics, structural, geotechnical) and systems-based approaches (design, risk and reliability, economic aspects, etc.) is required. I involved in educational activities in the field of hydraulic infrastructure and fluid mechanics section focuses on research and education related to hydraulic engineering systems and structures, probabilistic design and flood risk management.

I have been teaching courses since September 2014 and I have completed between 250 and 270 hours of annual TD equivalent teaching at the FST. These courses are spread over the two semesters of the engineering students' training, and some of them are intended at students of Bachelor's degree in Geology Sciences and Master's degree M1-M2. The contents of the main teaching interventions are presented according to the levels of study below (Table 1) :

Table 1. Courses Taught and field excursions.

CEFREM : CENTRE OF EDUCATION AND RESEARCH ON MEDITERRANEAN ENVIRONMENTS, UMR 5110 UPVD CNRS, FRANCE			
Date	Section	Courses	Total Hours (TD/C)
04-08/12, 2017	Licence SVT	Hydrologie - Hydrogéologie	8 TD
04-08/12, 2017	Master « Sciences de la Mer »	Ressources Hydrocarbures/Eaux	8 TD
DEPARTMENT OF GEOLOGY, FST			
Engineer in Geosciences			
2019 - present	IGS3	Mécanique des sols et des roches	14 TD × 2G
2014 - 2019	IGS4	Hydraulique souterraine	14 TD × 2G
2014 - present	IGS4	Mécanique des fluides	14 TD × 2G
2014 - 2015	IGS5	Modélisation en sciences de l'eau	14 C + 14 TD
Master's of Science degree in Earth Sciences			
2014- present	MR2-ST-HGA1	Initiation à la recherche	21 C + 14 TD
2014- present	MR2-ST-RMEV1	Initiation à la recherche	21 C + 14 TD
2014- present	MR2-ST-HGA1	Géostatistique	21 C + 14 TD
2014- present	MR2-ST-HGA1	Traitement statistique des données	21 C + 14 TD
2014- present	MR2-ST-HGA1	Techniques de communication	21 C + 14 TD
2014 - 2020	MR2-ST-HGA2	Modélisation hydrogéologique	14 TD
2018- present	MR2-ST-HGA1	Ecole de terrain	48 TD

DEPARTMENT OF GEOLOGY, FST			
Bachelor's level			
Date	Section	Courses	Total Hours (TD/C)
2020 - present	LSGA-2	Suivi des structures hydrauliques	14 C + 7 TD
2020 - present	LFST2	Géothermie	14 TD
2020 - present	LST2 - STG	Géotechnique des ouvrages et travaux	14 C + 14 TD
2018 - present	LFST1	Hydrologie	14 TD × 2G ¹
2018 - present	LFSTG2	Ressources en eaux	14 TD
2015 - present	LFST3-RME	Ressources en eaux en Tunisie	14 TD × 2G
2014 - 2019	LFSVT2	Hydrogéologie	14 C
2014 - 2018	LFST2	Hydrologie	14 TD × 2G
2014 - 2020	LAGT1	Processus de surface et milieux de sédimentation	14 TD × 2G

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING, HIGH INSTITUTE OF TECHNOLOGY OF ENVIRONMENT AND CIVIL ENGINEERING, ISTEUB			
Applied degree in Civil Engineering			
Date	Section	Courses	Total Hours (TD/C)
2010-2014	GSPC 2	Hydrologie - Hydrogéologie	14 TD × 4 G
2010-2014	GH 2	Gestion et prévision des Risques des Inondations	14 TD × 2G
2010-2014	GSPC 2	Gestion des chantiers de construction	14 TD × 2G

DEPARTMENT OF GEOSCIENCES : UNILASALLE - CAMPUS DE BEAUVAIS, FRANCE			
Date	Section	Courses	Total Hours (TD/C)
02-04/12, 2009	IG - Promo-G07	Bureau d'étude : Investigation Hydrogéologique	12 TD

¹ G : Group

2.2. Tutoring and follow-up of students

Since my recruitment as a Assistant-professor, I have had the opportunity to supervise 21 students in internships (1 in Geosciences Engineering cycle, 12 in Master's of Science degree in Earth Sciences and 11 in professional project of license in Geological Sciences) (Table 2). The role of the supervisor consists in accompanying the student in the definition of the subject, then in the research plan by bringing missing knowledge and in the writing of the internship thesis. Figure 1 shows the titles and keywords of the tutored internships in the form of a word cloud.



Fig. 1. Cloud of keywords referring to tutored research's.

Within this framework, most of the projects in which I supervised (Table 2) are carried out in partnership research structures such as:

- Department of Biosystems and Agricultural Engineering, Oklahoma State University, Stillwater, Oklahoma US;
- National research Institute of rural engineering, Water and Forests (INRGREF, Tunisia);
- Water Researches and Technologies Center (Borj Cedria, Tunisia);
- HydroSciences Montpellier (HSM), France;
- Department of Geosciences, UnilaSalle Beauvais, France;
- National Agronomic Institute of Tunisia;
- University of Djibouti, Faculty of Sciences, Department of Geology, Djibouti;
- Department of Geology, Liège University, Belgium;
- Several multi-disciplinary engineering firm operating in the areas of building, infrastructure, transportation, planning and environment.

Table 2. Supervised Student's projects.

Date	Student name	Specialty	Research subject
--/2021	Bahrini Amal	Master's of Science degree in Earth Sciences (HGA)	Caractérisation du comportement spécifique des traceurs en hydrogéologie

--/2021	Sirine Chtioui	Master's of Science degree in Earth Sciences (HGA)	Étude et simulation du pompage des eaux souterraines par les énergies renouvelables
--/2021	Dorsaf Yahyaoui	Master's of Science degree in Earth Sciences (HGA)	Etude hydrogéologique et géotechnique de barrage Saida, Zaghuan
03/2021	Fatma Slimani	Master's of Science degree in Earth Sciences (HGA)	Delineating Groundwater Recharge Zones in Chiba Watershed of Nabeul governorate Using MCDM Techniques: Analytical Hierarchy Process (AHP) and Multi-Influencing Factors (MIF)
03/2021	Souha Rjeibi	Master's of Science degree in Earth Sciences (HGA)	Apport de la télédétection dans la modélisation hydrogéologique du bassin versant Chiba (Cap-Bon, Tunisie) : Estimation des prélèvements à usage agricole
03/2021	Khaoula Askri	Master's of Science degree in Earth Sciences (HGA)	Effets du changement climatique et de stress humain sur la salinisation et la quantification des eaux souterraines dans le système côtier du Bassin versant de Chiba
01/2020	Khayrallah Ben-Achour	Master's of Science degree in Earth Sciences (HGA)	Caractérisation et modélisation de l'écoulement de l'eau et du transport des solutés sous conditions naturelles (Pluie et Evaporation) dans la région de Chiba (Nabeul)
01/2019	Béchir Ben Saber	Master's of Science degree in Earth Sciences (HGA)	Modélisation inverse des interactions zone non saturée/zone saturée –Evaluation des risques de salinisation du sol et de l'aquifère dans la plaine de Kairouan
01/2019	Mariem Ayari	Master's of Science degree in Earth Sciences (HGA)	Etude de la Vulnérabilité de la nappe de S'menja aux changements climatiques
03/2019	Abdoulfatah Chirdon Ali	Master's of Science degree in Earth Sciences (HGA)	Caractérisation hydrodynamique du système aquifère crayeux de Beauvais et Etude de la structuration du sous-sol par des méthodes géophysiques (France)

06/2016	Sahar Mahjoubi	Engineering Diploma of Earth Sciences (Ingénierie de l'Eau)	Etude de faisabilité de la recharge artificielle de la nappe de Morneg (NE Tunisie) par les eaux usées traitées de la STEP de Sud Meliane II
01/2015	Sirine Allouche	Master's of Science degree in Earth Sciences (HGA)	Analyse multicritère par la méthode MEDALUS ET Élaboration d'un plan d'aménagement anti érosif des bassins versants de Joumine amont (Gouvernorat de Bizerte)
01/2015	Mariem Saâdi	Master's of Science degree in Earth Sciences (HGA)	Modeling interactions between saturated and un-saturated zones by Hydrus-1D in semi-arid regions (plain of Kairouan, Central Tunisia)
<p>Co-ADVISOR</p> <p>Ichrak Khammessi, Agronomic Engineering PhD Student: <i>thesis "Goundwater resources management in a Tunisian Coastal Aquifer"</i>. It is part of the project « PEER: Cycle 7, SMART-WATER » entitled « The Use of Modeling, Monitoring and Smart Metering for Sustainable Groundwater Management in a Tunisian Coastal Aquifer».</p>			

3. PROJECT LEAD / RESEARCH PROPOSALS

A list of the 7 research projects in which I have enrolled is given in Table 3. All the projects are from International Calls for Proposals (EU, NAS, USAID, Erasmus, ...).

My participation in research projects is continuous since 2007. These projects are of different nature and size: water-energy nexus (Smart-Water), development (Altos, INCOMED), multi-disciplinary research in the hydrology field (SWIMED)...

Table 3. Participation in research projects.

Acronym	Theme	Funding	Date	Project Investigator	Contribution
AGREEMAR	Adaptive agreements on benefits sharing for managed aquifer recharge in the Mediterranean region	PRIMA Call Section 2 – Multi-topics 2021	2022 - 2025		Co- Project Investigator

----	Groundwater - Energy - Food nexus in Tunisian's coastal area : implications for water security	CMCU Utique: Code Campus France :47619UD, Code CMCU : 22G1003	2022 - 2025	A. ZGHIBI (FST)	Project Investigator
SMART-WATER	The use of modeling, monitoring and smart metering for sustainable groundwater management in a Tunisian coastal aquifer	Partnerships for Enhanced Engagement in Research Program (USAID PEER Cycle 7) \$175,400	2018-2021	A. ZGHIBI (FST)	Project Investigator
ALTOS	Sustainable water management for arid and semi-arid Mediterranean area	PRIMA Call Section 2 – Multi-topics 2018	2018-2021	F. Jacob (IRD)	Research contributor
----	Capacity Building in Water Resources in Maghreb Countries	EU Projects and North Africa (Tunisia, Morocco and Algeria)	2010-2013	J. Tarhouni (INAT)	Research contributor
INCOMED - ELMAA	Integrated Water Management of Mediterranean Phosphate Mining and Local Agricultural Systems	INCOMED Program – CEE, Project ID: 15410 Total budget: EUR 2 098 473	2005-2009	J. Tarhouni (INAT)	Research contributor
----	Water Resources Management in Arid and Saline Conditions, Case study of the Northeastern Coast Area, Cap-Bon	Collaboration between Sri-Lanka and Tunisia	2005-2008	J. Tarhouni (INAT)	Research contributor
<p>Pending</p> <p>Chanzy A.(PI), Zghibi, A., Napoli R., Dercas N., El-Raki S., Diaz A., De Michele, C., Skepastianos D., Trigo M.A.G., Soubeyroux J.M., Della Marta A., Simonneaux V., “Mediterranean water resources and global changes: adapting territories to water shortage”. PRIMA Pre-proposal Template (1st stage of a two-stage submission procedure). EUR 2 500 000</p>					

4. ACHIEVEMENTS AND AWARDS

For services to hydrogeology and water resources, I received the U.S. National Academies of Science, Engineering, and Medicine, Arab-American Frontiers Fellowship Award in 2018 and again twice in 2019, as mentioned below:

- 2019. Host institute: Civil and Architectural Engineering - Sultan Qaboos University, Mascat City, Oman, 12 – 25 June 2019,
- 2019. Host institute: Department of Biosystems and Agricultural Engineering, Oklahoma State University, US, 08 – 17 Mars 2019,
- 2018. The Symposium convenes "outstanding researchers from the Middle East and North Africa and the United States to discuss cutting edge research, November 4-6, 2018, Kuwait City, Kuwait.

I received a Fellow of the the Erasmus+ and Horizon 2020, Mobility project for higher education of training staff for six times:

- 2021/2022. Host institute: Department of Environment – University of Aegean, Greece.
- 2021/2022. Host institute: Department of Geography and Regional Planning – NOVA School of Sciences and Humanities, University of Nova of Lisbon, Portugal.
- 2021/2022. Host institute: SST/AGRO - Faculty of Bioscience Engineering SST/ELI - Earth and Life Institute – University of UCLouvain, Belgium.
- 2018. Host institute: Hydro-Sciences Montpellier, University of Montpellier, France, 07 – 14 October 2018,
- 2018. Host institute: Department of Geography, University of Malaga, Spain, 03 – 10 April 2018,
- 2017. Grant “Mobility project for higher education of teaching staff” awarded by the Erasmus+ and Horizon 2020 programmes. Host institute: CEFREM, University of Perpignan Via Domitia, France, 03 – 10 December 2017,

I also received the High Level Scientific Stage (SSHN 2016) awarded by the French Institute of Tunisia (IFT) relating to water issues:

- 2016. Host institute/Reserach-team: HydrISE, Hydrogeochemistry and Soil-Environment Interactions, Beauvais, France, 03 – 16 October 2016.

In 2009, I received a fellowship to participate to European Master-Doctorate Course on vulnerability of cultural heritage to climate change, European Youth Centre, Council of Europe, Strasbourg, France, 7- 11 September 2009

5. INVITED TALKS AND PANELS

I have been invited speaker for the following international events as showing in Fig. 2:

2019. *“An integrated study of water valuation in Chiba Basin (Cap-Bon Peninsula); Modeling and analyzing the use, efficiency, value, and governance of water.”*, Water Seminar Series, Seminar presentation in Biosystems and Agricultural Engineering, Oklahoma State University, US, March 13, 2019.

2019. “Multi-disciplinary hydrologic approaches to study stressed coastal aquifers in arid and semi-arid regions of Tunisia”, Water Seminar Series, Seminar presentation in Sultan Qaboos University "SQU" Department of Civil and Architectural Engineering, June 09 - 23, 2019.

2018. “Approaches to achieve sustainable groundwater management in the southern shore of the Mediterranean” Seminar presentation on Sixth arab-american frontiers of science, engineering, and medicine symposium, November 4-6, 2018, Kuwait City, Kuwait.

2018. “Water resources modelling and management in the Coastal Aquifer of Korba : Seawater intrusion and processes”, Seminar presentation in HydroSciences Montpellier, University of Montpellier, France, October 07 - 14, 2018.

2018. “Water resources modeling to inform adaptive water management in the Korba unconfined aquifer (Cap-Bon, NE of Tunisia)”, Seminar presentation in Department of Geography, Faculty of Philosophy and Letters Campus de Teatinos, University of Malaga, Spain, April 03 - 10, 2018.

2017. “Exploring Sustainable Water Resources Management Adaptation Strategies Through a Cyber-enabled Systems Approach”, Seminar presentation in CEFREM “Centre de Formation et de Recherche sur les Environnements Méditerranéens”, University of Perpignan Via Domitia, France, December 03 - 10, 2017.

2017. “Sustainable Water Management in Mediterranean Regions: Development of New Decisions Support Systems”, Seminar presentation in Fifth arab-american frontiers of science, engineering, and medicine symposium, November 2-4, 2017 in Rabat, Morocco.

2016. “Numerical Groundwater Modeling of Complex Aquifers (France-Tunisia): Geophysical, Geochemical and Numerical Approaches”, Seminar presentation in Aghyle (Agro-écologie, Hydrogéochimie, Milieux & Ressources), Département de Géosciences, SFR Condorcet FR CNRS 3417, Institut Polytechnique UniLaSalle Beauvais, France, October 03 - 16, 2016.

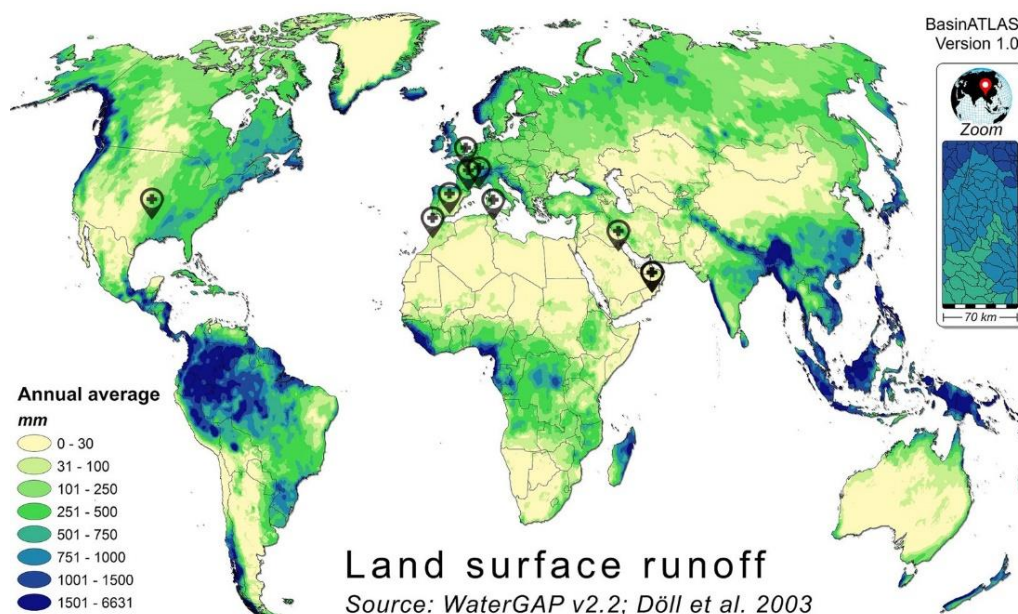


Fig. 2. Map of International events in some of the countries visited.

6. JOURNAL REVIEWER

Reflecting the increasing recognition of my scholarly work, I have been invited to act as a "peer-reviewer" in Q1 journals related to my research topics, including water resources management, Groundwater modelling, water-energy nexus

I've been reviewing papers for about 6 years, across more than 7 journals such as:

- Environmental Monitoring and Assessment: Electronic ISSN: 1573-2959.
- WATER: an international and interdisciplinary open-access journal, ISSN 2073-4441.
- Arabian Journal of Geosciences : SPRINGER NATURE - Electronic ISSN: 1866-7538.
- Journal of African Earth Sciences : Elsevier B.V. ISSN: 1464-343X.
- Groundwater for Sustainable Development: Elsevier B.V. ISSN: 2352-801X.
- Heliyon: Elsevier B.V. ISSN 2405-8440.
- Journal Hydrological Sciences Journal : Taylor & Francis Online, Online ISSN: 2150-3435.

7. PUBLICATIONS AND CONFERENCE CONTRIBUTIONS

I have 25 publications, 21 being peer-reviewed, and 4 having appeared in indexed international journals. Notably, I developed a growing collection of single authored works, including 10 articles in Q1 journals.

I demonstrate a strong collaborative record of co-authored works within interdisciplinary research projects advancing innovative contributions to the respective fields. Since 2017, I have been a co-supervisor and supervisor of several thesis at the National Agronomic Institute of Tunisia and Faculty of Sciences of Tunis; some have given place to scientific publications and international collaborations. Below you can find the list of publications:

7.1. Peer-reviewed articles

Souissi D., Sebei A., Souei A., **Zghibi A.**, Ghanmi, M., Amiri W. 2022. Flood Hazard mapping and assessment using fuzzy-analytic hierarchy process and GIS techniques in Takelsa, Northeast Tunisia. *Arabian J. of Geosciences*.

Boufekane A., Maizi D., Madene E., Busico G., **Zghibi A.** 2022. Hybridization of GALDIT method to assess actual and future coastal vulnerability to seawater intrusion. *J. of Environmental Management?* 15;318:115580. DOI: 10.1016/j.jenvman.2022.115580

Zghibi A., Merzougui A., Mirchi A., Zouhri L., Taupin J.D., Chekirbane A., 2022. Quantitative recharge estimation for groundwater sustainability in Tunisian coastal aquifer. Chapter Paper submitted to upcoming book "Artificial Intelligence and Modeling for Water Sustainability: Global Challenges" of "CRC Press Published by Taylor and Francis Group USA".

Elaid M., Boufekane A., Meddi M., Busico G., **Zghibi A.**, 2022. Spatial analysis and mapping of the groundwater quality index for drinking and irrigation purpose in the alluvial aquifers of Upper and Middle Cheliff basin (North-West Algeria). *Water Supply*, doi: 10.2166/ws.2022.107.

- Msaddek M.H., Merzougui A., **Zghibi** A., Chekirbane A., **2022**. Integrated decisional approach for watershed vulnerability prioritization using water and soil hazard index (WSHI) and AHP methods: Chiba watershed, Cap-Bon region, northeast Tunisia. *Arabian J. of Geosciences* 15(12):1148 DOI: [10.1007/s12517-022-10264-0](https://doi.org/10.1007/s12517-022-10264-0)
- Slimani F.E., **Zghibi** A., **2022**. Delineating of groundwater recharge zones in Chiba watershed of Nabeul governorate Using MCDM Techniques: Analytical Hierarchy Process (AHP) And Multi-Influencing Factors (MIF). Paper submitted to *Coasts MDPI journal*.
- Chekirbane A., Gasmi O., Mlayah A., Gabtni H., Khadhar S., Lachaal F., **Zghibi** A., Taupin J-D., **2022**. Anthropogenic aquifer recharge effect on groundwater sustainability in an agricultural plain along Wadi El Hma, northeast Tunisia: insights from geochemical tracers and geophysical methods. *Natural Resources Research*, <https://doi.org/10.1007/s11053-021-09991-6>
- Zghibi** A., Merzougui A., Mansary, A.S., Mirchi A., Zouhri L., Chekirbane A., Msaddek M.H., Souissi D., Mabrouk-El-Asmi A., Boufekane A., **2022**. Vulnerability of a Tunisian Coastal Aquifer to Seawater Intrusion: Insights from the GALDIT Model. *Water* 2022, 14 (7), 1177; <https://doi.org/10.3390/w14071177>.
- Merzougui A., **Zghibi** A., **2020**. Characterization of homogeneous regions for regional frequency analysis of heavy daily precipitation in central Tunisia. *Arabian Journal of Geosciences* : doi: [10.1007/s12517-020-06151-7](https://doi.org/10.1007/s12517-020-06151-7)
- Zghibi** A., Mirchi A., Msaddek M.H., Merzougui A., Zouhri L., Taupin J.D., Chekirbane A., Chenini I., Tarhouni T., **2020**. Using Analytical Hierarchy Process and Multi-Influencing Factors to Map Groundwater Recharge Zones in a Semi-arid Mediterranean Coastal Aquifer. *Water* 12,9,:doi: [10.3390/w12092525](https://doi.org/10.3390/w12092525)
- Zghibi** A., Mirchi A., Zouhri L., Taupin J.D., Chekirbane A., Tarhouni J., **2019**. Implications of groundwater development and seawater intrusion for sustainability of a Mediterranean coastal aquifer in Tunisia. *Environmental Monitoring and Assessment*.191, 696: doi : [10.1007/s10661-019-7866-5](https://doi.org/10.1007/s10661-019-7866-5)
- Hammami S., Zouhri L., Souissi D., Souei A., **Zghibi** A., Marzougui A., Dlala M., **2019**. Application of the GIS based multi-criteria decision analysis and analytical hierarchy process (AHP) in the flood susceptibility mapping (Tunisia). *Arabian Journal of Geosciences*, 12,653 : doi.org/10.1007/s12517-019-4754-9
- Souissi D., Zouhri L., Hammami S., Msaddek M.H., **Zghibi** A., Dlala M., **2018**. GIS-based MCDM - AHP modeling for flood susceptibility mapping of arid areas, southeastern Tunisia. *Geocarto International*; doi.org/10.1080/10106049.2019.1566405
- Chenini I., **Zghibi** A., Msaddek M.H., Dlala M., **2018**. Groundwater Vulnerability Mapping in Urbanized Hydrological System Using Modified Drastic Model and Sensitivity Analysis. *Environmental and Engineering Geoscience* 24, 3, 293-304; doi : [10.2113/EEG-1967](https://doi.org/10.2113/EEG-1967)
- Saâdi M., **Zghibi** A., Kanzari S., **2017**. Modelling interactions between saturated and un-saturated zones by HYDRUS-1D in semi-arid regions (plain of Kairouan, Central

Tunisia). *Environmental Monitoring and Assessment*, 190, 170; doi: 10.1007/s10661-018-6544-3

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- Chekirbane A., **Zghibi** A., Mirchi A., Alibakhshian K., Msaddek M.S., Merzougui A., Khammessi I., Aouissi J., Kefi M., 2021. SEWM: a promising water-energy nexus technology for sustainable groundwater resources management – insights from SMARTWATER project. *AGIC2021 Water, Global Changes and Groundwater Responses ”*, 3rd Atlas Georesources International Congress 22-24 March 2021, Tunisia.
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7.3. Reports

Zghibi A., Zouhri L., Tarhouni J., 2014. *Understanding groundwater chemistry using statistics techniques; Case of application: Korba unconfined aquifer system of Cap-Bon (North-east of Tunisia)*. LAP LAMBERT Academic Publishing, ISBN 978-3-8484-9020-2.

8. TRANSFERABLE SKILLS AND COURSES UNDERTAKEN

I developed university training internationally, conducting higher education studies in Netherlands, US, Spain, France and Tunisia. The mainly courses undertaken are listed below:

- 2022: Middle East North Africa (MENA) scholarship for a short course “Management of Irrigation and Drainage Systems” which is held as face to face course at IHE Delft Institute for Water Education, The Netherlands.
- 2019: Oklahoma State University, US Results---Based Management course (4 days course for successful proposal writing) making grant applications, getting published, entrepreneurship and inter---cultural awareness, and career management.
- 2009. EU Summer School 2009 “European Youth Centre, Council of Europe” 7 days course focusing on managing research and Vulnerability of cultural heritage to climate change.
- 2006. Training on eco-management tools (Eco-carte and G.A.D.E) organized by the International Center for Environmental Technologies of Tunis (CITET).

