

## CURRICULUM VITAE

### PERSONAL INFORMATION

Name, Surname	Ali, Fadel
Nationality	French, Lebanese
Address	Tours, France
E-mail	<a href="mailto:3li.fadel@gmail.com">3li.fadel@gmail.com</a>

*PhD in Environmental Sciences and Engineering (Paris-Est University, Ecole des Ponts Paris-Tech, 2014): hydrological and ecological modelling*

*Research areas: Remote sensing (water quality, snow, evaporation, land cover/land use, temperature, etc.); Water quality; Climate change; Hydrological & ecological modelling; Coastal hydrography; Snow and rivers hydrology; Integrated watershed management, Statistics; Soil, Entomology; GIS*

### WORK EXPERIENCE

<b>University of Tours</b> Since 2020 Occupation or position held Main activities and responsibilities	<b>LECTURER AND RESEARCHER</b>  <b>TEACHING STAISTICS AND INFORMATICS</b> <b>CONDUCTING RESEARCH ON THE IMPACT OF CYANOTOXINS ON AQUATIC INSECTS</b>
<b>UN Environment Programme</b>	<b>INTERNATIONAL CONSULTANT IN HYDROGRAPHY, GIS AND REMOTE SENSING</b> <b>3 CONSULTANCY REPORTS BETWEEN 2017AND 2021</b>
<b>National Council for Scientific Research (CNRS)</b> National center for remote sensing 2015 - 2023 Occupation or position held Main activities and responsibilities	<b>SCIENTIFIC RESEARCHER</b> <b>CONDUCT AND MANAGE NATIONAL, REGIONAL AND INTERNATIONAL PROJECTS RELATED TO HYDROLOGY, WATER QUALITY , GIS, HYDROGRAPHY, HYDROBIOLOGY, EVAPOTRANSPIRATION, SNOW HYDROLOGY, REMOTE SENSING AND ENVIRONMENTAL SCIENCES.</b>
<b>Lebanese University:</b>  Since 2015 Name and address of employer Occupation or position held Main activities and responsibilities	<b>PROFESSOR</b>  Faculty of Sciences, Hadath Lecturer Lecturer of “ <b>Geomatics and Reomte Sensing</b> ”
September to December 2014	<b>Expert in hydrobiology and reservoir hydrological modelling</b> for the HaiHe River Water Environmental Monitoring Center (Tianjin, China).
Name and address of employer Type of business or sector Occupation or position held Main activities and responsibilities	École des Ponts, LEESU, Paris, France Scientific expert Scientific expert The aim of the work was to provide capacity building on water quality monitoring for HaiHe River Center employees and to calibrate an open access hydro-dynamic ecological model to predict the dynamics of toxic cyanobacterial blooms in Yuqiao Reservoir used for drinking water

production (More details can be find in Vincon-Leite et al., 2017).

## EDUCATION AND TRAINING

22 September, 2014	<b>PhD in Environmental Science, Engineering and Technology.</b> <b>Thesis subject:</b> Physical-chemical functioning and development of phytoplankton in Karaoun Reservoir (Lebanon). Application of a hydrodynamic-ecological model.
Name and type of organisation providing education and training	<b>Université Paris-Est / École des Ponts ParisTech</b> , Laboratoire Eau Environnement et Systèmes Urbains (LEESU) – Doctoral School SIE (Sciences, Engineering, Environment) – France, codirection with the Lebanese National Council for Scientific Research
Principal subjects & occupational skills covered	Hydrological and ecological modelling, phytoplankton, Biogeochemistry, Water quality
Title of qualification awarded	PhD in Environmental Sciences and Engineering
Level in National classification	PhD
July 2010	<b>Masters in Hydrosiences.</b> <b>Thesis subject:</b> Tracking the physico-chemical and biological parameters in the water of urban areas. Application on Lake Bailly and rainwater tanks. (Research Internship in École des Ponts ParisTech - France, funded by an excellence scholarship of Agence Universitaire de la Francophonie (AUF)).
Name and type of organisation providing education and training	Lebanese University, Doctoral school in Sciences and Technology, Beirut, Lebanon
Principal subjects & occupational skills covered	Microbal ecology, biogeochemistry, Water quality
Title of qualification awarded	Research Master (Hydrosiences MSc)
Level in National classification	Research Master (MSc)

## PROJECTS I HAVE MANAGED AND/OR WORKED ON

**2019-22:** Managing water resources within Mediterranean agrosystems by accounting for spatial structures and connectivities, under climate changes (**Euro-Mediterranean ANR project; Project coordinator in Lebanon:** <https://www.altos-project.org/en/partnership> )

**2018-22:** Global Change: Assessment and Adaptation to Mediterranean Region Water Scarcity (**Euro-Mediterranean ANR project, Project coordinator in Lebanon:** <https://www.cesbio.cnrs.fr/chaams/description/wp6/> )

**2018-20:** Using remote sensing and 3D modelling to monitor, understand and manage harmful algal blooms in Karaoun reservoir (Lebanon). (**Project coordinator**)

**2016-18:** Monitoring the harmful algal blooms of Karaoun Reservoir and Mantua Lakes using remote sensing. Calibration and validation of Chlorophyll-a and phycocyanin algorithms. (**Project coordinator with Italian CNR**)

**2015-17:** A modeling approach as a part of an early warning system used to predict and manage toxic cyanobacterial blooms in Karaoun Reservoir, Lebanon (**Project coordinator**)

**2017:** The national monitoring programme for Coast and Hydrography indicators in the framework of EcAp-MED II, Lebanon. PAP/RAC.

**2015-17:** Potassium level and water use efficiency in fertigated potato under deficit irrigation. (**Project partner**)

**2016-17:** Assessment of salt and drought tolerant forage genotypes of sorghum and millet

**2016-17:** Enhancing the Use of Salt Affected Soils and Saline Water for Crop and Biomass Production and Reducing Land and Water Quality Degradation in ARASIA States Parties

**2014-16:** Snow cover dynamics and snow hydrology of the Lebanese Mountain Chains. (**Project partner**)

## WORK EXPERIENCE

**Water quality modelling and management under future climate scenarios**

**Mapping Soil degradation and erosion in the Arab region using ArcGIS**

**Remote Sensing of water quality using Landsat 8 and Sentinel 2**

**Monitoring and modelling snow hydrology through field measurements, weather stations and MODIS Satellite images to manage water resources based on different climate projections**

**Monitoring evapotranspiration rates using satellite images to manage agricultural water**

**Managing weather stations**

**Sampling and *in situ* measurements in water quality:** field campaign design, water sampling, different *in situ* measurement devices: CTD profiler, pigment quantification probes, high-frequency sensors. Sampling and *in situ* measurements during ANR PULSE project (measurement campaigns on 50 freshwater bodies in Île-de-France).

**Sampling and *in situ* measurements for soil and plant physiology:** crop yield estimation, leaf area index, tensiometers, chlorophyll meter, leaf water potential, etc.

**Laboratory analysis:** identification and counting of phytoplankton under microscope, analyses of nutrients and chlorophyll-a, analysis of toxins using ELISA test, water quality

**Environmental evaluation methods**

**Hydrodynamic-ecological modelling** (includes water level, temperature, sedimentation scenarios of nutrients and phytoplankton)

## INTERNATIONAL TRAININGS

American University of Beirut (AUB) and Center for Hydrometeorology and Remote Sensing (CHRS, University of California), Beirut, Lebanon, October 9-11, 2019

► Regional workshop on remote observation of precipitation using artificial intelligence

Food and Agriculture Organization of the United Nations (FAO) and University of Cordoba, Cordoba, Spain, 10-14 September 2019

► Production and use of the CORDOVA-ET system

Japan International Cooperation Agency (JICA), Tokyo, Japan, October 15 – 24, 2018

► Strategic use of hydrometeorological data observation technology

United Nations Educational, Scientific and Cultural Organization (UNESCO) – Beirut-Lebanon,

8-11 May 2017

► Water productivity, smart water project

United Nations Educational, Scientific and Cultural Organization (UNESCO) – Beirut-Lebanon, 7-9 December 2016

► Geographic information system and remote sensing for water management

International Atomic Energy Agency (IAEA) and International Center for Biosaline Agriculture (ICBA), Dubai, United Arab Emirates, October 2-13, 2016

► Water management and use of the crop simulation model (AquaCrop)

Institute for Water and Environment (DHI), Genoa, Italy, September-October 2015

► Development of downscaling procedures for oceanographic and environmental numerical models in the Mediterranean Sea to predict the proliferation of ostreopsis

IAEA Vienna, Seibersdorf, Austria, 4-15 May 2015

► Nitrogen management by isotopic techniques

University of Nicosia, Cyprus, 5-6 March 2015

► Geographic Information System, ArcGIS

## Languages

English: fluent – French: fluent – Arabic: fluent – Italian: beginner

## Programming skills

Rstudio; Python; SQL, PostGIS

## Remote sensing & mapping skills

ArcGIS; QGIS

## CO-SUPERVISION OF SCIENTIFIC INTERNSHIPS

### (PhD degree)

- Najwa Sharaf, Using remote sensing techniques and modelling to monitor and understand and manage harmful algal blooms. Application to Karaoun reservoir (Lebanon) and Lake Creteil (France). Codirected between Paris-Est University and Lebanese CNRS. Defended on 22/04/2021
- Noura Alice Hammoud, Mechanisms of transfer and accumulation of toxins in fish following Cyanobacteria bloom in a lake ecosystem. between Pau University and Lebanese CNRS. Defended on 13/12/2021

### (Masters degree)

- Eliana Nehme, 2019. Assessing the trophic index and the dynamics of phytoplankton groups of Lake Karaoun during Spring-Summer 2019. Lebanese university, Faculty of Sciences.
- Doha Maatouk, 2019. Assessment of the potential of Sentinel-2 Satellite imagery to estimate cyanobacterial blooms in Karaoun Reservoir. Lebanese university, Faculty of Sciences
- Raed Ghosn-Halawei, 2018. Bathymetry mapping of Lebanese coast using different satellite imagery tools. Lebanese university, Faculty of Sciences.
- Mohammad Moussa, 2018. Modelling water level, temperature and toxic cyanobacterial biomass using an open access hydrodynamic-ecological model. Comparison between automatic and manual calibration approaches. Lebanese university, Faculty of Engineering.
- Malak Kanj, 2017. Identification and mapping of heavy metal accumulation in different plant families in Lebanon using XRF and GIS. Lebanese university, Faculty of Sciences.
- Mariam Siblini, 2017. Modelling of water level, temperature and biomass of phytoplankton in Karaoun Reservoir. Lebanese university, Faculty of Sciences.
- Lama Salameh, 2016. The primary production at the Lebanese coast: its evolution and controlling factors. Lebanese university, Faculty of Sciences.
- Najwa Sharaf, 2016. Estimation of cyanobacterial blooms in Karaoun Reservoir using satellite remote sensing imagery. Lebanese university, Faculty of Sciences.

## REFEREED PUBLICATIONS

1. **Fadel, A.**, Guerrieri, F., & Pincebourde, S. (2023). The functional relationship between aquatic insects and cyanobacteria: A systematic literature review reveals major knowledge gaps. *Total Environment Research Themes*, 100078. <https://doi.org/10.1016/j.totert.2023.100078>
2. Ghoussein, Y., Abou Hamdan, H., **Fadel, A.**, Coudreuse, J., Nicolas, H., Faour, G., & Haury, J. (2023). Biology and ecology of *Pontederia crassipes* in a Mediterranean river in Lebanon. *Aquatic Botany*, 103681.
3. Ghoussein, Y., Faour, G., **Fadel, A.**, Haury, J., Abou-Hamdan, H., & Nicolas, H. (2023). Hyperspectral discrimination of *Eichhornia crassipes* covers, in the red edge and near infrared in a Mediterranean river. *Biological Invasions*, 1-17. <https://doi.org/10.1007/s10530-023-03131-2>
4. **Fadel, A.**, Faour, G., Mhawej, M., Ghazal, M., & Jarlan, L. (2022). A Combined Remote Sensing and Modelling Approach to Simulate the Impact of Climate Change on the River Discharge in a Lebanese Snow-Covered Basin. In *Satellite Monitoring of Water Resources in the Middle East* (pp. 379-391) **Springer water**. [https://link.springer.com/chapter/10.1007/978-3-031-15549-9\\_21](https://link.springer.com/chapter/10.1007/978-3-031-15549-9_21)
5. Atoui, A., El Haj, A., Slaoui, Y., **Fadel, A.**, Slim, K., Andaloussi, S. A., ... & Khraibani, Z. (2022). Spatial assessment of water river pollution using the stochastic block model: Application in different station in the Litani river, Lebanon. **Statistics, Optimization & Information Computing**.
6. Darwish, T., **Fadel, A.**, Chahine, S., Baydoun, S., Jomaa, I., & Atallah, T. (2022). Effect of Potassium Supply and Water Stress on Potato Drought Tolerance and Water Productivity. **Communications in Soil Science and Plant Analysis**, 1-13. <https://doi.org/10.1080/00103624.2022.2043341>
7. Hammoud, N.A., Zervou, S.K., Kaloudis, T., Christophoridis, C., Paraskevopoulou, A., Triantis, T.M., Slim, K., Szpunar, J., **Fadel, A.**, Lobinski, R. and Hiskia, A., (2021). Investigation of the Occurrence of Cyanotoxins in Lake Karaoun (Lebanon) by Mass Spectrometry, Bioassays and Molecular Methods. **Toxins**, 13(10), 716. <https://doi.org/10.3390/toxins13100716>
8. Mhawej, M., Nasrallah, A., Abunnasr, Y., **Fadel, A.**, & Faour, G. (2021). Better irrigation management using the satellite-based adjusted single crop coefficient (aKc) for over sixty crop types in California, USA. **Agricultural Water Management**, 256, 107059. <https://doi.org/10.1016/j.agwat.2021.107059>
9. Sharaf, N., Lemaire, B. J., **Fadel, A.**, Slim, K., & Vinçon-Leite, B. (2021). Assessing the thermal regime of poorly monitored reservoirs with a combined satellite and three-dimensional modeling approach. **Inland Waters**, 11(3), 302-314. <https://doi.org/10.1080/20442041.2021.1913937>
10. **Fadel, A.**, Kanj, M., & Slim, K. (2021). Water Quality Index variations in a Mediterranean reservoir: a multivariate statistical analysis relating it to different variables over 8 years. **Environmental Earth Sciences**, 80(2), 1-13. <https://doi.org/10.1007/s12665-020-09364-x>
11. Allam, M., Mhawej, M., Meng, Q., Faour, G., Abunnasr, Y., **Fadel, A.**, & Xinli, H. (2021). Monthly 10-m evapotranspiration rates retrieved by SEBALI with Sentinel-2 and MODIS LST data. **Agricultural Water Management**, 243, 106432. <https://doi.org/10.1016/j.agwat.2020.106432>
12. **Fadel, A.**, Mhawej, M., Faour, G., Slim, K., (2020). On the application of METRIC-GEE to estimate spatial and temporal evaporation rates in a Mediterranean lake. **Remote Sens. Appl. Soc. Environ.** 20. <https://doi.org/10.1016/j.rsase.2020.100431>
13. Mhawej, M., **Fadel, A.**, & Faour, G. (2020). Evaporation Rates in a Vital Lake: A 34-year assessment for the Karaoun Lake. **International Journal of Remote Sensing**. 41 (14), 5321-5337. <https://doi.org/10.1080/01431161.2020.1739354>
14. **Fadel, A.**, Salameh, L., Kanj, M., & Kobaissi, A. (2020). Evolution of primary production and its drivers on the Lebanese coast between 1986 and 2013. **Limnological Review**, 20(4), 207-217. <https://doi.org/10.2478/limre-2020-0020>
15. Najem, S., Bitar, A.A., Faour, G., Jarlan, L., Mhawej, M., **Fadel, A.**, Zribi, M., (2020). Drought Assessment using Micro-Wave Timeseries of Precipitation and Soil Moisture Over the Mena Region, in: **2020 Mediterranean and Middle-East Geoscience and Remote Sensing Symposium (M2GARSS)**. pp. 289-292. <https://doi.org/10.1109/M2GARSS47143.2020.9105262>
16. Kanj, M., & **Fadel, A.** (2020). On the use of validated ocean models to investigate the evolution of primary productivity in the Levantine Sea. **Limnological Review**, 20(1), 23-31. <https://doi.org/10.2478/limre-2020-0003>
17. **Fadel, A.**, Sharaf, N., Siblini, M., Slim, K., & Kobaissi, A. (2019). A simple modelling approach to simulate the effect of different climate scenarios on toxic cyanobacterial bloom in a eutrophic reservoir. **Ecohydrology & Hydrobiology**. <https://doi.org/10.1016/j.ecohyd.2019.02.005>
18. Sharaf, N., **Fadel, A.**, Bresciani, M., Giardino, C., B. J. Lemaire, Slim, K., Faour, G., & Vinçon-Leite, B. (2019). Lake surface temperature retrieval from Landsat-8 and retrospective analysis in Qaraoun Reservoir, Lebanon. **Journal of Applied Remote Sensing**. <https://doi.org/10.1117/1.JRS.13.044505>
19. Sharaf, N., Bresciani, M., Giardino, C., Faour, G., Slim, K., & **Fadel, A.** (2019). Using Landsat and in situ data to map turbidity as a proxy of cyanobacteria in a hypereutrophic Mediterranean reservoir. **Ecological Informatics**, 50, 197-206. <https://doi.org/10.1016/j.ecoinf.2019.02.001>

20. Ghoussein, Y., Nicolas, H., Haury, J., **Fadel, A.**, Pichelin, P., Abou Hamdan, H., & Faour, G. (2019). Multitemporal Remote Sensing Based on an FVC Reference Period Using Sentinel-2 for Monitoring Eichhornia crassipes on a Mediterranean River. *Remote Sensing*, Vol. 11. <https://doi.org/10.3390/rs11161856>
21. Darwish, T., Atallah, T., & **Fadel, A.** (2018). Challenges of soil carbon sequestration in NENA Region. *SOIL*, 4, 225–235. <https://doi.org/10.5194/soil-2017-39>
22. Ghoussein, Y., Mhawej, M., Jaffal, A., **Fadel, A.**, El Hourany, R., & Faour, G. (2018). Vulnerability assessment of the South-Lebanese coast: A GIS-based approach. *Ocean and Coastal Management*, 158. <https://doi.org/10.1016/j.ocecoaman.2018.03.028>
23. Pinardi, M., Bresciani, M., Villa, P., Cazzaniga, I., Laini, A., Tóth, V., **Fadel, A.**, Austoni, M., Lami, A., Giardino, C. (2018). Spatial and temporal dynamics of primary producers in shallow lakes as seen from space: Intra-annual observations from Sentinel-2A. *Limnologica*, 72, 32–43. <https://doi.org/10.1016/j.limno.2018.08.002>
24. **Fadel, A.**, Lemaire, B.J., Vinçon-Leite, B., Atoui, A., Slim, K., Tassin, B., (2017). On the successful use of a simplified model to simulate the succession of toxic cyanobacteria in a hypereutrophic reservoir with a highly fluctuating water level. *Environmental Science and Pollution Research* 24, 20934–20948. <https://doi.org/10.1007/s11356-017-9723-9>
25. Vinçon-Leite, B., **Fadel, A.**, Lemaire, B.J., Bonhomme, C., Li, Y., Le Divechen, G., Zhang, J., & Luo, Y., (2017). Short-term forecasting of cyanobacteria blooms in Yuqiao reservoir, China. *La Houille Blanche*, 2017-April(2). <https://doi.org/10.1051/lhb/2017015>
26. Fayad, A., Gascoin, S., Faour, G., Fanise, P., Drapeau, L., Somma, J., **Fadel, A.**, Al Bitar, A., & Escadafal, R. (2017). Snow observations in Mount Lebanon (2011-2016). *Earth System Science Data*, 9(2). <https://doi.org/10.5194/essd-9-573-2017>
27. Darwish, T., & **Fadel, A.** (2017). Mapping of soil organic carbon stock in the Arab countries to mitigate land degradation. *Arabian Journal of Geosciences*, 10(21), 474. <https://doi.org/10.1007/s12517-017-3267-7>
28. El Hourany, R., **Fadel, A.**, Gemayel, E., Abboud-Abi Saab, M., & Faour, G. (2017). Spatio-temporal variability of the phytoplankton biomass in the Levantine basin between 2002 and 2015 using MODIS products. *Oceanologia*, 59(2), 153–165. <https://doi.org/10.1016/j.oceano.2016.12.002>
29. **Fadel, A.**, Atoui, A., Lemaire, B. J., Vinçon-Leite, B., & Slim, K. (2015). Environmental factors associated with phytoplankton succession in a Mediterranean reservoir with a highly fluctuating water level. *Environmental Monitoring and Assessment*, 187(10), 633. <https://doi.org/10.1007/s10661-015-4852-4>
30. **Fadel, A.**, Atoui, A., Temsah, M., Matar, M., & Slim, K. (2015). "Monitoring the trophic state and phycocyanin pigment of Qaraoun Reservoir, Lebanon". *Journal of Environmental Hydrology*, 23 (1), paper 7
31. **Fadel, A.**, Atoui, A., Lemaire, B., Vinçon-Leite, B., & Slim, K. (2014). Dynamics of the toxin cylindrospermopsin and the cyanobacterium Chrysosporum (Aphanizomenon) ovalisporum in a Mediterranean eutrophic reservoir. *Toxins*, 6(11), 3041–3057. <https://doi.org/10.3390/toxins6113041>
32. **Fadel, A.**, Lemaire, B. J., Atoui, A., Vinçon-Leite, B., Amacha, N., Slim, K., & Tassin, B. (2014). First assessment of the ecological status of Qaraoun reservoir, Lebanon. *Lakes and Reservoirs: Research and Management*, 19(2), 142–157. <https://doi.org/10.1111/lre.12058>
33. Slim, K., **Fadel, A.**, Atoui, A., Lemaire, B. J., Vinçon-Leite, B., & Tassin, B. (2014). Global warming as a driving factor for cyanobacterial blooms in Lake Qaraoun, Lebanon. *Desalination and Water Treatment*, 52, 2094–2101. <https://doi.org/10.1080/19443994.2013.822328>

#### INTERNATIONAL CONSULTANCIES with UNEP (PAP/RAC)

1. **Fadel, A.** (2021). EO8 Coastal Ecosystems and Landscapes Common Indicator 16-Length of coastline subject to physical disturbance due to the influence of human-made structures–Lebanon. <http://iczmplatform.org/storage/documents/Wx09jrlJaTVq42lBesSrdMkb5MaAjbBHR0BxNUxw.pdf>
2. **Fadel, A.** (2021). Report on the baseline situation for common indicator 15 "Location and extent of the habitats potentially impacted by hydrographic alterations" in Lebanon. <http://iczmplatform.org/storage/documents/USH5x9SWHmxsY7eevjgLVmURB9hxjTC8fqqgMbso.pdf>
3. **Fadel, A.** (2017). The Lebanese national monitoring programme for coast and hydrography indicators in the framework of ecap-med ii <http://iczmplatform.org/storage/documents/bNgfb1dMc7JoHT0K1yL8JH7giNlBk1zzm6unNQwD.pdf>

#### CHAPTERS

1. **Fadel, A.**, & Slim, K. (2018). Evaluation of the Physicochemical and Environmental Status of Qaraoun Reservoir. In *The Litani River, Lebanon: An Assessment and Current Challenges* (pp. 71-86). Springer, Cham
2. Darwish, T., **Fadel, A.**, Atallah, T., Jomaa, I., Baydoun, S., 2018. Lebanon Chapter 6 [Challenges and Opportunities for Crop Production in Dry and Saline Environments in ARASIA Member States]. International Atomic Energy Agency (IAEA).



## INTERNATIONAL AND NATIONAL CONFERENCES

1. **Fadel, A.**, Maatouk D., Slim K., Faour G., Mapping aquatic cyanobacterial blooms using Sentinel-2 satellite imagery **The 5th International Electronic Conference on Remote Sensing, November 2023.** <https://sciforum.net/manuscripts/15898/manuscript.pdf>
2. Fadel, A., Guerrieri, F., Pincebourde, S., The impact of cyanotoxin anatoxin-a on mosquito and dragonfly larvae: a serious ecological threat to aquatic ecosystems. **XII European Congress of Entomology, October 2023.**
3. Sharaf, N., **Fadel, A.**, Lemaire, B. J., Slim, K., & Brigitte, V. L.. Use of three-dimensional modelling to assess the spatial and temporal dynamics of cyanobacteria in a Mediterranean reservoir. In **The 18th International Conference on Harmful Algae, October 2018.**
4. Paolo Villa, Ilaria Cazzaniga, **Ali Fadel**, Giuseppe Morabito, Viktor Tóth, Claudia Giardino, Mariano Bresciani. Monitoring of primary producers composition, cover and abundance in Mantua Lakes system from Sentinel-2 data. **10th Symposium for European Freshwater Sciences, 2-7 July 2017, Olomouc, Czech Republic** (Oral presentation)
5. T. Darwish, **A. Fadel**, B. Safaa, I. Jomaa, S. Chahine, T. Atallah. Enhancing potato drought tolerance by regulating the potassium level in the soil under limited irrigation. **22nd International Scientific Conference of LAAS. Kaslik, Lebanon 06 and 07 April, 2017** (Oral presentation)
6. Ali Nasrallah, Nicolas Baghdadi, Talal Darwish, Ghaleb Faour, Hatem Belhouche, **Ali Fadel**. Crop mapping and yield estimation in the Bekaa Plain of Lebanon. **22nd International Scientific Conference of LAAS. Kaslik, Lebanon 06 and 07 April, 2017** (Oral presentation)
7. Ihab Jomaa, Talal Darwish, **Ali Fadel**, Zahraa Karim, Hiyam Youssef, Therese Atallah. Performance of three genotypes of sorghum [*Sorghum bicolor* (L.) Moench] under saline conditions in coastal Lebanon. **22nd International Scientific Conference of LAAS. Kaslik, Lebanon 06 and 07 April, 2017** (Oral presentation)
8. Therese Atallah, Ihab Jomaa, **Ali Fadel**, Hoda Khatoun, Hiyam Youssef, Talal Darwish. Performance of two genotypes of millet [*Pennisetum glaucum* [L.] R.Br.] in saline conditions in coastal Lebanon. **22nd International Scientific Conference of LAAS. Kaslik, Lebanon 06 and 07 April, 2017** (Oral presentation)
9. T. Darwish, **A. Fadel**. Mapping of Soil Organic Carbon Stock in the Arab Countries. **Global symposium on soil organic carbon, Rome, Italy, 21-23 March 2017** (Oral presentation)
10. Sharaf, N., **Fadel, A.**, Lemaire, B., Slim, K., and Vinçon-Leite, B., 2017. Monitoring cyanobacterial blooms using satellite remote sensing and modelling techniques. Application to Karaoun Reservoir, Lebanon. **Phycotox annual conference, GIS Cyano, Gif Sur Yvette, France, 14-16 Mars 2017** (Oral presentation).
11. Hamze M, Darwish T, Faour G, Abdallah C, Shaban A, **Fadel A**, Fayad A, Abou Najem S. Adoption of advanced techniques to improve national resilience to climate change in Lebanon. **12th International Dryland Development Commission (IDDC), Alexandria, Egypt, 21-24 August 2016.** (Oral presentation and article in international proceedings)
12. T. Darwish, **A. Fadel**, B. Safaa, I. Jomaa, M. Awad, T. Atallah. Improving Water Productivity in the Bekaa Valley, the Case of Potato Crop. **22nd International Scientific Conference of LAAS. Kaslik, Lebanon 14 and 15 April, 2016** (Oral presentation)
13. **A. Fadel**, K. Slim. Assessing the evolution of the ecological state of Karaoun Reservoir: poorer quality observed during 2015. **22nd International Scientific Conference of LAAS. Kaslik, Lebanon 14 and 15 April, 2016** (Oral presentation)
14. R. El Hourany, **A. Fadel**, E. Gemayel, G. Faour. Spatio-temporal variability of the phytoplankton biomass in the Levantine basin between 2004 and 2015. **22nd International Scientific Conference of LAAS. Kaslik, Lebanon 14 and 15 April, 2016.** (Poster)
15. T. Darwish, **A. Fadel**, B. Safaa, I. Jomaa, M. Awad, Z. Hammoud, M. Kamar, T. Atallah. "Enhancing potato drought tolerance by regulating potassium fertilization and irrigation in Bekaa valley-Lebanon" (**IrriMed 2015**). **CIHEAM – Mediterranean Agronomic Institute of Bari, 23-25 September 2015** (Oral presentation)
16. Brigitte Vinçon-Leite, **A. Fadel**, B. J. Lemaire, Céline Bonhomme, Yinghao Li, Gwendal Le Divechen, Jun Zhang, Yang Luo. Modelling cyanobacteria dynamics in Yuqiao reservoir. **2nd Sino-French Forum on Water Sciences (SFFWS), Caen, 3 November 2015** (Oral presentation)
17. **A. Fadel**, B. J. Lemaire, A. Atoui, K. Slim, B. Vinçon-Leite, Modelling the seasonal succession between toxic cyanobacteria *Microcystis aeruginosa* and *Aphanizomenon ovalisporum* in a Mediterranean Middle-East reservoir using a simplified model, **2015 ASLO (American Society of Limnology and Oceanography) Aquatic Sciences Meeting, Granada, Spain** (Oral presentation)
18. **A. Fadel**, B. J. Lemaire, A. Atoui, B. Vinçon-Leite, K. Slim, B. Tassin. "Modelling the seasonal succession of toxic cyanobacteria in Karaoun reservoir, Lebanon" **15th World Lake Conference, 1-5 September 2014, Perugia, Italy.** (Oral presentation)
19. **A. Fadel**, B. J. Lemaire, A. Atoui, B. Vinçon-Leite, K. Slim, B. Tassin. "Dynamics of the toxin cylindrospermopsin and of its producer, *Aphanizomenon ovalisporum*, in Karaoun Reservoir, Lebanon". **European Geosciences Union, General Assembly. Vienne, May 2014.** (Poster)
20. **A. Fadel**, B. J. Lemaire, B. Vinçon-Leite, A. Atoui, K. Slim, M. Matar, B. Tassin. "First application of a hydrodynamic-ecological model on Karaoun Reservoir, Lebanon". **GIS cyanobactéries 2014, Parent (France), 24-25 mars 2014.** (Oral presentation)

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