



Prof. Dr. Adnan Ahmad Tahir

Date of birth: 07/06/1981 | **Nationality:** Pakistani | **Gender:** Male |

Phone number: (+92) 3336569277 (Mobile) | **Email address:**

uaf_adnan@hotmail.fr | **Website:**

<https://www.cuiatd.edu.pk/faculty/dr-adnan-ahmad-tahir/> |

Whatsapp Messenger: +923336569277 |

Address: Department of Environmental Sciences, COMSATS University Islamabad, Abbottabad campus, University road, 22060, Abbottabad, Pakistan (Work)

● ABOUT ME

- Life-time member of Pakistan Engineering Council
- HEC Pakistan approved PhD supervisor
- Postdoctorate in Geosciences and Environment from Lausanne, Switzerland
- PhD in Water, Earth and Environmental sciences from Montpellier, France

● WORK EXPERIENCE

22/05/2023 – CURRENT Abbottabad, Pakistan

PROFESSOR (TENURED) COMSATS UNIVERSITY ISLAMABAD, ABBOTTABAD CAMPUS

- Research and teaching in the field of Environmental Sciences specialized in Surface Hydrology - Water resources management - Climate change - Snow and glacier hydrology - GIS and Remote Sensing - supervision of PhD/MS/BS students (40 hours/week)

01/01/2018 – 21/05/2023 Abbottabad, Pakistan

ASSOCIATE PROFESSOR COMSATS UNIVERSITY ISLAMABAD, ABBOTTABAD CAMPUS

- Research and teaching in the field of Environmental Sciences specialized in Surface Hydrology - Water resources management - Climate change - Snow and glacier hydrology - GIS and Remote Sensing - supervision of PhD/MS/BS students (40 hours/week)

09/12/2011 – 31/12/2017 Abbottabad, Pakistan

ASSISTANT PROFESSOR COMSATS UNIVERSITY ISLAMABAD, ABBOTTABAD CAMPUS

- Research and teaching in the field of Environmental Sciences specialized in Surface Hydrology - Water resources management - Climate change - Snow and glacier hydrology - GIS and Remote Sensing - supervision of PhD/MS/BS students (40 hours/week)

15/09/2014 – 15/09/2015 Lausanne, Switzerland

POSTDOCTORAL RESEARCHER FACULTY OF GEOSCIENCES AND ENVIRONMENT, UNIVERSITY OF LAUSANNE

-Research and teaching in the field of Environmental Sciences specialized in Alpine Environments - Surface Hydrology - Water resources management - Climate change - Snow and glacier hydrology - GIS and Remote Sensing - supervision and consultancy to PhD/MS/BS students (40 hours/week)

01/09/2008 – 30/09/2011 Montpellier, France

PHD RESEARCH FELLOW LABORATOIRES HYDROSCIENCE, UNIVERSITÉ DE MONTPELLIER

- Worked as PhD research fellow to complete the doctorate thesis work - Guidance to junior MS/PhD students (40 hours/week)

01/01/2008 – 30/06/2008 Paris, France

INTERNEE (PAID) HBAN, CEMAGREF, ANTONY

- Worked on Flood forecasting models - Water resources management (40 hours/week)

10/04/2005 – 20/06/2007 Faisalabad, Pakistan

LECTURER FACULTY OF AGRICULTURAL ENGINEERING & TECHNOLOGY, UNIVERSITY OF AGRICULTURE, FAISALABAD

- Teaching at Faculty of Agricultural Engineering - Surveying and Levelling - Surface Hydrology (40 hours/week)

15/09/2015 – 01/03/2016 North Carolina, United States

NATURAL RESOURCES CONSULTANT RESEARCH TRIANGLE INSTITUTE (RTI), INTERNATIONAL

- Consultancy on Snowmelt runoff modelling and water resources management to analyze the environmental impacts of Diامر Bhasha Dam, Pakistan (10 hours/week)

● EDUCATION AND TRAINING

15/09/2014 – 15/09/2015 Lausanne, Switzerland

POSTDOCTORATE Faculty of Geosciences and Environment, University of Lausanne

01/09/2008 – 30/09/2011 Montpellier, France

DOCTORATE (PHD) - WATER AND ENVIRONMENTAL SCIENCES Université de Montpellier, France

Website <https://www.umontpellier.fr/>

01/09/2007 – 31/08/2008 Paris, France

M2 (MASTERS) - ENVIRONMENTAL AND WATER SCIENCES (HYDROLOGY-HYDROGEOLOGY)

Sorbonne Université - Faculté des Sciences et Ingénierie, Campus Pierre et Marie Curie

Website <https://sciences.sorbonne-universite.fr/en/sorbonne-universite-campus-pierre-et-marie-curie>

01/10/2003 – 30/09/2005 Faisalabad, Pakistan

M.SC. (HONS.) AGRICULTURAL ENGINEERING Faculty of Agricultural Engineering and Technology, University of Agriculture, Faisalabad

Website <http://web.uaf.edu.pk/>

01/10/1999 – 30/09/2003 Faisalabad, Pakistan

B.SC. AGRICULTURAL ENGINEERING Faculty of Agricultural Engineering and Technology, University of Agriculture, Faisalabad

Website <http://web.uaf.edu.pk/>

27/01/2021 – 30/01/2021 Lahore, Pakistan

CERTIFICATE OF HANDS-ON TRAINING ON "ENVIRONMENTAL AND CLIMATE CHANGE ANALYSIS USING GOOGLE EARTH ENGINE" Geo-Spatial Works

Website https://geospatialworks.com/?fbclid=IwAR3cE34FpReiqd7sjQwRg_F7kZ04OJVU0db1E0mFJSIwK8GWylcsoPIKfOA

18/06/2013 – 28/06/2013 Torino, Italy

ATTENDEE OF SUMMER SCHOOL ON "CLIMATE CHANGE AND THE MOUNTAIN ENVIRONMENT" The Institute of Atmospheric Sciences and Climate of the National Research Centre, Italy (ISAC-CNR)

20/06/2012 – 28/06/2012 Torino, Italy

ATTENDEE OF SUMMER SCHOOL ON "CLIMATE, AEROSOLS AND THE CRYOSPHERE" The Institute of Atmospheric Sciences and Climate of the National Research Centre, Italy (ISAC-CNR)

● LANGUAGE SKILLS

Mother tongue(s): **URDU | PANJABI; PUNJABI**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C2	C2	C2
FRENCH	B2	B2	B1	B2	B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● DIGITAL SKILLS

Microsoft Office | Google Drive | Social Media | Hydrological Modelling | Google Earth Engine (GEE) / Google Earth Pro | Flood Modelling | Zoom | Microsoft Powerpoint | REMOTE SENSING | R-Basics | GIS software: Expert QGIS and good control of ArcGIS

● ADDITIONAL INFORMATION

NETWORKS AND MEMBERSHIPS

Islamabad

Pakistan Engineering Council - Lifetime Membership I am lifetime member of Pakistan Engineering Council (PEC). This membership is renewed every 3 years on the basis of credit scores which I am securing successfully till now.

Approved PhD Supervisor by Higher Education Commission (HEC) of Pakistan I am HEC Approved PhD Supervisor by Higher Education Commission (HEC) of Pakistan since 2012.

CONFERENCES AND SEMINARS

Conference, seminars, course development & book publications 1) **Climatic characterization of Baltoro glacier (Karakoram) and northern Pakistan from in-situ stations** - *Published In* Geophysical Research Abstracts (2013) - EGU VIENNA

2) **Comparison of the responses of two temperate Alpine valley glaciers to climate change at the decadal scale** - *Published In* Geophysical Research Abstracts (2015) - EGU VIENNA

3) **Spatio-temporal snow cover change and hydrological characteristics of the Astore, Gilgit and Hunza river basins (western Himalayas, Hindukush and Karakoram region) - Northern Pakistan** - *Published In* Geophysical Research Abstracts (2015) - EGU VIENNA

4) **Hydro-meteorological investigations in the central Karakoram range (Northern Pakistan)** - *Published In* Water in mountain areas. Better observations for better forecasting (2011) - LYON, FRANCE

5) **Cryosphere dynamics in the Karakoram and western Himalayan subcatchments of Upper Indus River Basin using MODIS data** - *Published In* Karakoram Resources and Climate Change: Glacier, Water and Ecosystem (2013) - ISLAMABAD

Book chapter

6) **Climatic characterization of Baltoro glacier (Karakoram) and northern Pakistan from in-situ stations** - *Published In* "chapter 7 Climate Change and Engineering Geology. In: Engineering Geology for Society and Territory" - 2015

Name of Co-Author(s)

Palazzi Elisa, Tahir Adnan Ahmad, Cristofanelli Paolo, Vuillermoz Elisa and Provenzale Antonello

7) **Status and Change of the Cryosphere in the Extended Hindu Kush Himalaya Region.** In: Wester P., Mishra A., Mukherji A., Shrestha A. (eds) **The Hindu Kush Himalaya Assessment.** Springer, Cham (Lead author) - 2019

Name of Co-Author(s)

Bolch T, Shea JM, Liu S, Azam FM, Gao Y, Gruber S, Immerzeel WW, Kulkarni A, Li H, Tahir AA et al.

8) In addition to that, I wrote **one chapter in the Book "Mountain Studies: Understanding and managing mountains for people and nature"**.

9) **Course development at COMSATS University:**

-I have developed/improved following **three courses** which were approved by the Board of studies at COMSATS University Islamabad, and are being taught at BS, MS and PhD level in Environmental Sciences:

- 1) Remote Sensing & GIS
- 2) Cryosphere & Climate Change
- 3) Hydrological Systems & Environment

PROJECTS

Funded research projects - Total 8

1. Glacier changes and associated hydrologic impact under warming climate in Hunza Valley along the Sino-Pakistan Economic Corridor (**30 Million PKR - International collaborative Project between China, Pakistan and Nepal – Approved by Funding Agency: NSFC China and ICIMOD) (Completed 2018-2021)**
2. Potential risks of glacier lake outburst floods under climate change along China-Pakistan Economic Corridor (CPEC) – **CoPI (7.5 Million PKR – Consortium Research Grant – Approved by Pakistan Science Foundation) (2021-2024) - Ongoing**
3. Spatio-Temporal Glacier Variation and its Influence on the Water Availability in Hunza Basin along the CPEC Route - **PI (~8 Million PKR – JSEP – Approved by Pakistan Science Foundation & NSFC China) (2023-2024) - Ongoing**
4. Exploring the nexus of air pollution, climate change and cryosphere in the context of CPEC and future water availability from the Hunza River Basin – **PI (~153 Million PKR – Submitted to Grand Challenge Fund of World Bank & HEC) (2021-2024)**
5. How clean is the air that we breathe across the South Asia: exploring the challenges, sources, and mitigation prospects in Pakistan – **CoPI (~188 Million PKR – Submitted to Grand Challenge Fund of World Bank & HEC) (2021-2024)**
6. Policy for agriculture adaptation to drought and its relation to climate change and human activities in South Punjab, Pakistan - **CoPI (~6.6 Million PKR – Submitted to NRPU - HEC) (2021-2024)**
7. Investigating the snow cover and glaciers variation trend in the Gilgit River basin, using satellite remote sensing – HEC project of Rs. 0.5 million, approved in May, 2012 for 1 year duration – **Completed**
8. Climate change impact on Cryosphere melt and hydrology of a high-altitude river catchment area – Use of a blend of Remote Sensing and ground data – 0.16 Million PKR (**Completed**)

HONOURS AND AWARDS

Honours/Awards

1. Research Productivity Award during 2014-2023, every year
2. Best Research Project Award (2018-2021)
3. Four appreciation/commendation letters received for various duties for the University
4. Honorarium and appreciation for extraordinary performance at Department of Environmental Sciences, COMSATS University during two academic years (2013/14 & 2017/18)
5. Won HEC Overseas Scholarship from Pakistan & France for MS and PhD studies in France (2007-2011)
6. Won Swiss Govt Excellence Scholarship for Postdoctoral research in Switzerland (2014-2015)

MANAGEMENT AND LEADERSHIP SKILLS

Member/Leader of various committees · Established **MoU with University of Yunnan Kunming, China** and running a joint research project with Chinese researchers through NSFC and ICIMOD funding.

· Published a **book chapter** on first ever comprehensive assessment report on HKH glaciers: **Status and Change of the Cryosphere in the Extended Hindu Kush Himalaya Region**. In: Wester P., Mishra A., Mukherji A., Shrestha A. (eds) **The Hindu Kush Himalaya Assessment**. Springer, Cham (Lead author) – 2019.

· External **member of the Board of Studies (BoS)** for Department of Agricultural Engineering, KFUEIT - Rahim Yar Khan

· Member of **Tenure Track Review Committee** for the Department of Agricultural Engineering, KFUEIT - Rahim Yar Khan

· Member of **Tenure Track Review Committee** for the Faculty of Agricultural Engineering at Arid Agricultural University, Rawalpindi (PMAS-AAR)

· Member of **Tenure Track Review Committee** for the Department of Land & Water conservation at Arid Agricultural University, Rawalpindi (PMAS-AAR)

· Member of **Tenure Track Review Committee** for the Department of Environmental Sciences, COMSATS University Islamabad

· **Group Leader of research group** "Climate change and ecosystem" at ENv Sciences department.

· Member of "Departmental Comprehensive exam Committee".

· Member of "Campus Services committee".

· Manager of the Automatic Weather Station installed at COMSATS Abbottabad.

ORGANISATIONAL SKILLS

Administrative experience

1. Worked as Senior Warden of COMSATS University (Pakistan) Boys Hostel for 3 years
2. Convenor of Admission Campaign Committee at COMSATS University
3. Organized two International webinars as convenor & member of organizing committee for 3 International conferences at COMSATS University
4. Research Group Leader - Climate change and Ecosystem at the Environmental Sciences Department, 2013-2023

RESEARCH SUPERVISION

01/12/2011 – CURRENT

Supervision of PhD/MS/BS students

Ph.D. = 8 (3 completed; 5 in progress (3 in co-supervision)), MS = 21, BS = 10

RESEARCH PUBLICATIONS

01/09/2011 – CURRENT

15 Selected Publications (Full list is provided separately)

Journal publications – (Total=44; Total IF >180; Citations=2187 - As of March-2023)

- 1) Heterogeneous Mass Balance of Selected Glaciers in the Hindu Kush, Karakoram, and Himalaya between 2000 and 2018. Published in [European Journal of Remote Sensing](#) (2023)
 - 2) Trends and projections of Land Use Land Cover and Land Surface Temperature using an Integrated Weighted Evidence-Cellular Automata (WE-CA) model – Published in [Environmental Monitoring and Assessment](#) (2022)
 - 3) Simulation of the Meltwater under different Climate Change Scenarios in a Poorly Gauged Snow and Glacier-fed Chitral River Catchment (Hindukush Region) – Published in [Geocarto International](#) (2022)
 - 4) Modeling of rainfall-runoff events using HEC-HMS model in southern catchments of Jerusalem Desert-Palestine – Published in [Arabian Journal of Geosciences](#) (2022)
 - 5) Quantification of glacier mass budgets in the Karakoram region of Upper Indus Basin during the early twenty-first century – *Published in [Journal of Hydrology](#) (2021)*
 - 6) Surging dynamics of South Rimo Glacier, Eastern Karakoram – Published in [Environmental Research Letters](#) (2021)
 - 7) Flood Hazard Mapping of the Rivers in Snow and Glacier fed Basins of different Hydrological Regimes using Hydrodynamic model under RCP Scenarios – Published in [Water](#) (2021)
 - 8) Surging dynamics of glaciers in Hunza valley under an equilibrium mass state since 1990 - Published in [Remote Sensing](#) (2020)
 - 9) Upward expansion of Supra-glacial Debris Cover in the Hunza Valley, Karakoram during 1990 ~ 2019 – Published in [Frontiers in Earth Science](#) (2020)
 - 10) Impacts of Climate Change on the Water Availability, Seasonality and Extremes in the Upper Indus Basin (UIB) – Published in [Sustainability](#) (2020)
 - 11) Spatio-temporal changes in the six major glaciers of the Chitral River basin (Hindukush Region of Pakistan) between 2001 and 2018 – Published in [Journal of Mountain Sciences](#) (2020)
 - 12) Spatio-temporal Trends in Snow Extent and their Linkage to Hydro-climatological and Topographical Factors in the Chitral River Basin (Hindukush, Pakistan) – Published in [Geocarto International](#) (2020)
 - 13) Analysis and simulation of land cover changes and their impacts on land surface temperature in a lower Himalayan region. Published in [Journal of Environmental Management](#) (2019).
 - 14) Simulating Current and Future River-Flows in the Karakoram and Himalayan Regions of Pakistan Using Snowmelt-Runoff Model and RCP Scenarios. Published in [Water](#) (2019).
 - 15) The influence of tropical forcing on extreme winter precipitation in the western Himalaya – *Published in [Climate Dynamics](#) (Feb 2017)*
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All the certificates/proves about the information presented in CV are available on demand.