

# DR. SAIMA SHAIKH

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Department of Geography  
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## EDUCATION

<b>Ph.D.</b>	University of Karachi, Department of Geography	2010
Title of Research:	Predicting spatial distribution of mosquito-borne diseases in Karachi through SRS Techniques, Supervisor: <i>Prof. Dr. Jamil H. Kazmi (Meritorious Professor)</i>	
M.Sc.	University of Karachi, Department of Geography, (1 <sup>st</sup> Division)	2005
B.Sc. (Hons.)	University of Karachi, (Geography, Chemistry, Bio-Statistics), (1 <sup>st</sup> Division)	2004
Intermediate	Board of Intermediate Education, Karachi, (2 <sup>nd</sup> Division)	2001
Matriculation	Board of Secondary Education, Karachi, (1 <sup>st</sup> Division)	1999

## HONORS/AWARDS/ APPRECIATION CERTIFICATES

**Dawood University of Engineering and Technology Karachi Shield and Appreciation Certificate**, awarded as Resource Person in Two days' workshop on Introduction to GIS for Disaster Risk Management, held from September 18 – 19, 2022

**University of The Punjab, Shield and Appreciation Certificate**, Awarded as Course instructor for Manage your References using EndNote, held on August 24, 2022

**The Islamia University, Bahawalpur Shield and Appreciation Certificate**, awarded as Resource Person in UAV/ Drone Application for Land and Environment, held from March 27 – 30, 2022

**Certificate of Appreciation**, from Department of Geography (UoK) for contributing as the facilitator of UAV Remote Sensing Workshop, held in Karachi from 09 -12 November, 2021

**Certificate of Appreciation**, from Department of Geography (UoK) for contributing as the organizer of GIS Day Seminar, held in Karachi 13<sup>th</sup> November, 2021

**Certificate of Appreciation**, from Pakistan Geographical Association (PGA) for contributing as the paper presenter 16<sup>th</sup> All Pakistan Geographical Conference, held in Lahore from 23-25 March, 2021

**Certificate of Appreciation**, from Pakistan Geographical Association (PGA) for contributing as the Lead Organizer of 15<sup>th</sup> All Pakistan Geographical Conference, held in Karachi from 21 - 24 April, 2018

**Certificate of Appreciation**, from SURE Asia as organizer of First South Asia Regional SURE Conference 18-19 Jan. 2017

**Appreciation Certificate**, awarded by the Vice Chancellor, University of Karachi for valuable contribution in the development of Dr. Iqtidar H. Zaidi Digital Image Processing Lab. April, 2016

**Appreciation Certificate**, awarded by the Department of Zoology, University of Karachi as Resource Person in 11<sup>th</sup> Training Workshop on Wetland Management – 2013

**Indus Conservation Award (2012)**, Awarded by WWF Pakistan and jointly Secured by Karachi University and Shehri, June 2012 (contributed as Lead Spatial Ecologist)

**GC University, Lahore Shield and Appreciation Certificate**, awarded for the Valuable Contribution as Resource Person in Digital Cartography Course, held from April 18 -23, 2012

**Department of Computer Science, University of Karachi Appreciation Certificate**, awarded for the Valuable Contribution as Resource Person in Foundations of GIS Course, held from January 31-February 4, 2010

**Certificate of Appreciation**, from Pakistan Geographical Association (PGA) for Contributing as the Lead Organizer of 13<sup>th</sup> All Pakistan Geographical Conference, held in Karachi from December 2008

**Author and Presenter Shield**, by the Department of Architecture and Planning, NED University of Engineering in Technology on the Occasion of Fourth Seminar on Urban and Regional Planning for Presenting one of the Best Papers on Urban Ecology, 2006

## WORK EXPERIENCE

<b>Assistant Professor</b>	Department of Geography, University of Karachi, Karachi	July 7, 2011-Present
<b>Lecturer</b>	Department of Geography, Federal Urdu University for Science & Technology, Karachi	Jan. 20, 2011-July 6, 2011
<b>Project Coordinator</b>	Spatial Ecology Lab., Department of Geography, University of Karachi, Karachi and <b>Coordinator</b> Sustainable Land Management Project (SLMP) Ministry of Environment, Government of Pakistan	June 30, 2009-Jan. 19, 2011
<b>Full Time Co-operative Teacher</b>	Department of Geography, University of Karachi, Karachi	Feb. 27, 2006- June 30, 2009
Member ERP-KU	Department of Geography, University of Karachi	2020 – to date
Member ORIC	Department of Geography, University of Karachi	2016 – to date

Member Board of Studies	Department of Geography, University of Karachi	2019 – 2022
Student Advisor	Department of Geography, University of Karachi,	2018 – 2021
Member Board of Faculty of Science	Department of Geography, University of Karachi	2015 - 2018
Member Board of Faculty of Arts	Department of Geography, University of Karachi	2015 - 2018

## PUBLICATIONS

1. Arshad, S., Kazmi, J. H., **Shaikh, S.**, Fatima, M., Faheem, Z., Asif, M., Arshad, W., (2022). Geospatial Assessment of Early Summer Heatwaves, Droughts, and their Relationship with Vegetation and Soil Moisture in the Arid Region of Southern Punjab, Pakistan, *Journal of Water and Climate Change*, Vol. 13 (11), doi: 10.2166/wcc.2022.425 (**W Category, Impact Factor**)
2. Naqvi, S.A.A.; Sajjad, M.; Waseem, L.A.; Khalid, S.; **Shaikh, S.**; Kazmi, S.J.H. (2021). Integrating Spatial Modelling and Space–Time Pattern Mining Analytics for Vector Disease-Related Health Perspectives: A Case of Dengue Fever in Pakistan. *Int. J. Environ. Res. Public Health* 2021, 18, 12018. <https://doi.org/10.3390/ijerph182212018> (**W Category, Impact Factor**)
3. Sarwar F, Kazmi J H, **Shaikh, S.** (2021). A GIS based analysis of essential habitat for six commonly caught species in coastal creeks of Sindh, Pakistan. *IJFS*. 2021; 20 (3) :789-809. , (HEC Recognized: **X Category, Impact Factor**)
4. Kazmi, J.H., Haase, D., Shahzad, A., **Shaikh, S.**, Zaidi, M. H. and Qureshi, S (2021). Mapping Spatial Distribution of Invasive Alien Species through Satellite Remote Sensing in Karachi, Pakistan: An Urban Ecological Perspective. *Int. J. Environ. Sci. Technol.* Vol. 19. <https://doi.org/10.1007/s13762-021-03304-3> (HEC Recognized: **W Category**).
5. Azmat, A., Kazmi, S.J.H, Shahzad, A., and **Shaikh, S.** (2020). Mapping Change in Spatial Extent and Density of Mangrove Forest at Karachi Coast Using Object Based Image Analysis. *International Journal of Economic and Environmental Geology*. Vol. 11 (1) 118-122. (HEC Recognized: **Y Category**)
6. Naqvi, S. A. A., Jan, Bulbul., **Shaikh, S.**, Kazmi, S. J. H., Waseem, Nasar-u-minAllah, M. and Abbas, N., (2019) Changing Climatic Factors Favor Dengue Transmission in Lahore, Pakistan, *Environments*, 6, 71; doi:10.3390/environments6060071
7. Farhan, S. B., Zhang, Y., Aziz, A., Gao, H., Ma, Y., Kazmi, J., Shahzad, A., Hussain, I., Mansha, M., Umar, M., Nasir, J., Shafiq, M., Farhan, Y., **Shaikh, S.**, Zamir, U.B., Asad, F., & Ahmed, R., (2018), Assessing the impacts of climate change on the high altitude snow- and glacier-fed hydrological regimes of Astore and Hunza, the sub-catchments of Upper Indus Basin, *Journal of Water and Climate Change*.
8. Shahzad, A., Kazmi, J. H., Farhan, S., **Shaikh, S.**, Aziz, A., Khan, H. U. A., Fatima, A., Ahmed, F. (2018) Mapping Turbidity Levels in the Lake’s Water using Satellite Remote Sensing Technique, *International Journal of Economic and Environmental Geology*, Vol. 9 No. 3, pp. 40 – 43

9. Siddiqui, A., Shahzad, A., **Shaikh, S.**, Khan, M., Spatio-Temporal Evaluation of Productivity of and Urban Park, Using Biomass and Vegetation Indices Techniques of Remote Sensing, (2018) Pakistan Geographical Review, Vol.72, No.1, 2018, PP. 16-25
10. Farhan, S.B., Kainat, M., Shahzad, A., Kazmi, S. J. H., **Shaikh, S.**, Zhang, Y., Gao, H., Javed, M. N., and Zamir, U. B. (2018) Discrimination of Seasonal Snow Cover in Astore Basin, Western Himalaya using Fuzzy Membership Function of Object-Based Classification, Int. J. Econ. Environ. Geol. Vol. 9(2)20-25, 2018
11. Naqvi, S. A. , Waseem, L. A., & **Shaikh, S.**, (2018) Methods in Geographical Information Systems for Public Health: A dengue perspective in Lahore, Journal of Biodiversity and Environmental Sciences (JBES) ISSN: 2220-6663 (Print) 2222-3045 (Online) Vol. 13, No. 1, p. 201-210, 2018 <http://www.innspub.net>
12. Kainat, M., Shahzad, A., Farhan, S., Kamzi, S. J. H., Shukat, S. S., **Shaikh, S.**, Aziz, A. (2018) Forest-fire burned area mapping using combinations of spectral indices as membership function in object based image analysis (obia), International Journal of Biology and Biotechnology, Vol. 15 No. 4, pp. 729-734.
13. Khan, M. M., **Shaikh, S.** and Siddique, A., (2017) A Geo-Historical Analysis Of Spatial And Demographic Changes in Karachi (1947-1969), Pakistan Geographical Review, Vol.71, No.1, PP 69-88 69
14. Naqvi, S. A., Kazmi, J. H., **Shaikh, S.** and Akram, M. (2015). Evaluation of Prevalence Patterns of Dengue Fever in Lahore District through Geo- Spatial Techniques, Journal of Basic and Applied Sciences, Vol. 11, 20-30 (**HEC Recognized**)
15. **Shaikh, S.**, Kazmi, J. H. and Qureshi, S. (2014), Monitoring the diversity of malaria/dengue vector in Karachi – studying spatial variation of genera and sub-genus of mosquitoes under different ecological conditions, Ecological Process Vol. 03, No. 11, (**Springer**)
16. Khanum, F., Kazmi, S. J. H. and **Shaikh, S.** (2014). A Spatio-Temporal Assessment of Green Turtle Habitat at HawkesBay, Karachi through Geo-Informatics Techniques, *Journal of Basic & Applied Sciences*, 10, 377-383.
17. Kazmi, J. H., Qureshi, S., and **Shaikh.** (2013). Role of Spatial Technology (GIS and RS) in Sustainable Management of Land Resources, Sustainable Land Management Programme (SLMP), Ministry of Climate Change, Government of Pakistan and Global Environmental Facility (GEF), UNDP: Islamabad. pp. 84.
18. **Shaikh, S.** and Kazmi, J. H. (2010). Monitoring Seasonal Densities of Mosquitoes and Their Impact on the Incidence of Vector-Borne Diseases in Karachi, Pakistan Geographical Review, Vol. 64, No. 2, July – December 2010, pp 132 – 149
19. Kazmi, J., Anis, Y. and **Shaikh, S.** (2010). Impact of Emerging Geo-Informatics Technologies in City and Regional Planning of Pakistan , Journal of History and Social Sciences, Vol. 1 (1), pp. 93-104
20. Kazmi, J. H. and **Shaikh, S.** (2012). Impacts of Urbanization on Agricultural Areas of Karachi, Shehri: Karachi
21. Kazmi, J. H., Zamir, U. B. And **Shaikh, S.** (2010). GIS Mapping and Analysis of Marine Turtle Habitat of Karachi Coast: An Ecological Evaluation of Sandspit/Hawksbay Beach Ecosystem, Research Monograph, WWF Pakistan and Sheri-Pakistan: Karachi, pp. 100.

22. Kazmi, J. H., **Shaikh, S.** And Zamir, U. B. (2010). Ecological and Socio-Economic Assessment of the Use of *Prosopis juliflora* for Bio-Char Production in Pakistan. A Project of Dry Net (Bothends, Amsterdam: Netherland. Sponsored by European Commission and UNCCD. , pp. 54

### **Research Students Supervision**

#### **Ph. D. (Awarded)**

1. Syed Ali Asad Naqvi (2015), Measuring the Risk of Dengue Prevalence in Lahore through Geo-spatial Techniques
2. Farheen Khanum (2015), Monitoring Turtle Habitats in Karachi through GIS Techniques
3. Sadia Sulltan Wahla (2023) Co- Supervisor

#### **M.S. (Degree Awarded)**

1. Tehzeeb Hussain (2014), Geospatial Assessment of the Impacts of Urbanization on Gilgit District

#### **Ph. D. (Under progress)**

1. Aisha Siddique (Since 2012) Distribution and Analysis of Parks in Karachi
2. Muhammad Hussain (2021) Impact of Population Growth on Urban Expansion, and Future Prediction Modeling, A Comparative Study of Multan, Bahawalpur and Bahawalnagar using Geospatial Techniques.

#### **M.Phil. (Under progress)**

1. Hafiz Uzair Ahmed Khan (Sep., 2019) *Identification of River Bank Erosion and Inundation Hazard Zones Using Geospatial Techniques (Thesis Submitted to ASRB)*
2. Maryam Khan (2021) Impact of Urbanization and Infrastructure Development on Natural Drainage of Karachi Co-Supervisor *(Thesis Submitted to ASRB)*
3. M. Safeer (Sep., 2019) *Application of Thermal Remote Sensing Technique For Lithological Mapping (Thesis Submitted to ASRB)*
4. Quarat ul Ain (Jan., 2020) *Exploring Optical Datasets for Mapping Forest Density Change*

### **PROJECTS**

1. Environmental Impact Assessment (EIA) PUNJAB ARTERIAL ROADS IMPROVEMENT PROJECT (PARIP), Public hearing on 2-3 December, 2022
2. RAMS, Corridors 1 & 2, Govt. of Punjab, ADB (2021 – 2022)
3. Karachi Neighborhood Impact Project, World Bank, ESMP Report (2021 – 2022)
4. Exploring Spatial Distribution of Covid-19 incidence in Karachi: A Diseases Ecology Perspective by Dean Faculty of Science, University of Karachi, (2021-2022) in process
5. Monitoring Spatial distribution of plants diversity in selected parks of Karachi Sponsored by Dean Faculty of Science, University of Karachi, (2015-2016)
6. Fisheries Resources Appraisal in Pakistan Project through GIS Inventory, Food and Agricultural Organization (FAO) and WWF, (2012-2015)
7. Monitoring Variable Habitats of Dengue Vector(*Aedes aegypti*) in Karachi through the Techniques of Urban Ecology Sponsored by Dean Faculty of Science, University of Karachi (2013 -2014)

8. Comparison of 20 Years Coastal Erosion in Pakistan through Satellite Imageries, WWF-Pakistan (2013-2014)
9. GIS Development for Sindh Education Reform Programme (SERP), World Bank, (2012-2014)
10. GIS Development for Punjab Education Reform Programme (PERP), World Bank, (2012-2014)
11. Mapping Invasive plant species at the Northern Areas of Karachi using Spectral Mixing Analysis (SMA), Co- Principle Investigator, Sponsored by Dean Faculty of Science, University of Karachi (2014-2015)
12. Exploring Relationship between Fish habitats, environment and Bathymetry through Geospatial Techniques, Principle Investigator, Sponsored by Dean Faculty of Science, University of Karachi
13. GIS Mapping of AKDN service locations in Pakistan and PERN locations, Aga Khan University, 2012
14. Ecology of DHA City Karachi, with Prof. Dr. Spiro N. Pollalis (Harvard University) & OCL, Pakistan, and Dr. Jamil H. Kazmi , September 2010 – June 2012.
15. Spatial Route Modeling for K-IV Water Pipeline Project, 2006-12, CDGK, Karachi 2012
16. Assessment of Agricultural Areas in Karachi through Geo-Informatics, Shehri-Pakistan, 2010- 2011
17. Role of Spatial Technology (GIS and RS) in Sustainable Management of Land Resources, SLMP, GEF, UNDP and Ministry of Environment, Government of Pakistan, June-October, 2010.
18. GIS Mapping of Karachi Coast and GIS based Analysis of Marine Turtle Habitat: Sandspit/ Hawksbay Beach Ecosystem, A Project Jointly Sponsored by Shehri-WWF Pakistan, 2009-2010
19. Ecological and Socio-economic Assessment of the Use of *Prosopis Juliflora* for Bio-Char Production in Pakistan. A Project of Dry Net Bothends, Amsterdam: Netherland. Sponsored by European Commission and UNCCD.
20. Identification and Monitoring of Mosquito Breeding Pocket on Satellite Data: A Framework for the Studies of Vector-Borne Diseases, Dean, Faculty of Science University of Karachi, Karachi, 2009-2010
21. Women Empowerment in Various Industries of Pakistan Identification through Spatial Tools, MEDA-Rassta, 2009
22. GPS based Parcel Survey of Karachi Cadastre, Awarded by Sui Southern Gas, Karachi, 2007-2009
23. Monitoring Green Areas of Karachi through Geo-informatics, Grant awarded by the, Dean, Faculty of Science University of Karachi, May 2007-2008
24. Monitoring the Wetlands of Lower Sindh through SRS Techniques, Grant awarded by the, Dean, Faculty of Science University of Karachi, May 2006-2007
25. An Appraisal of the Green Spaces in Karachi through Remote Sensing Techniques: A Social Audit to Explore the Associated Impacts; 2008-2009, A projected submitted to Dean Faculty of Science, University of Karachi as Research Associate.

### **Environmental Impact Assessment (EIAs) Projects**

1. EIA of DHA Wind Farm of 50 MW (February, 2017)
2. SEIA Extension of Water Resources for Faisalabad City, Phase-II (January 2017)
3. EIA of RWASA Sewerage Scheme ( for NA-56) (Submitted to Punjab-EPA, 2017)
4. EIA of RWASA Sewerage Scheme (for UCs -74 and 77) (Submitted to Punjab-EPA, 2017)
5. EIA of RWASA Water Supply Scheme (PP6) (Submitted to Punjab-EPA, 2017)
6. EIA of RWASA Water Supply Scheme (Gastro Phase-II) (2017)
7. EIA of K-IV Water Project of KW&SB (2016)
8. CDM PDD BRT Faisalabad (PDD Document Submitted to PMA) (2016)
9. CDM PDD Purple Line Lahore (PDD Document Submitted to PMA) (2016)
10. EIA of Lahore Knowledge Park, 2016
11. CDM of Multan Metro, 2015
12. EIA of LDA City Lahore, 2014-15
13. EIA of Multan Metro Bus Lahore, Multan, 2014
14. EIA of DHA City Karachi (DCK) jointly conducted by OCL and KU (2010 – 2013)
15. SEIA, Post Rehabilitation of Roads in Pakistan, Asian Development Bank (ADB), 2012

16. EIA of Rahim Yar Khan Industrial Estate, Government of Punjab, 2012
17. REIA of NHA South Package Flood Affected Roads, Asian Development Bank July 2012
18. EIA of Mai-Kolachi Sewage Treatment Plant, 2010
19. EIA of Larkana-Nasirabad Highway , Karachi, 2009
20. Open Source EIA of Lyari Express Way, Karachi, 2006

## **WORKSHOP/ CONFERENCE PARTICIPATIONS**

Webinar on 2022 Flooding in Pakistan, National Institute of Oceanography (NIO), December 14, 2022

International Workshop on Climate Change II, “GEOSUS, Geography and Sustainability, December 8-9, 2022 (Online).

GIS Day Seminar on GIS for Ocean Sciences, National Institute of Oceanography (NIO), November 14, 2022

International Workshop on Climate Change I, “GEOSUS, Geography and Sustainability, November 14 - 15, 2022 (Webinar).

Seminar on Assessment of Tidal Energy Potential along Indus Delta, National Institute of Oceanography (NIO), June 21, 2022

Sindh Climate Change Policy (Draft) and Linkages with UNSDCF Outcome-3 on Climate Change and River Indus Basin Management & WFP’s Country Strategic Plan, World Food Programme, Pakistan (WFP-Pak) & Government of Sindh, Pakistan, February, 16-17, 2022.

International Workshop on Geography and Sustainability, 2021 “Geography of the Anthropocene: Transforming our World for Sustainable Development”, International Geographical Union, November 23- 24, 2021 (Webinar).

UAV Remote Sensing Workshop, Facilitator, Dept. of Geography, University of Karachi, November 09 -12, 2021.

GIS Day Seminar, Organizer, Department of Geography, University of Karachi, November 13, 2021

16th All Pakistan Geographical Conference, an Ecological Evaluation of BRT (Green Line) through Geospatial Techniques (Online Paper Presenter), Dept. of Geographer, University of the Punjab, March 23 – 25, 2021.

15th All Pakistan Geographical Conference, (Organizer and Session moderator), Dept. of Geographer, University of Karachi, April 21 - 23, 2018.

15th All Pakistan Geographical Conference, Monitoring Perennial Grasses on Temporal Satellite Imageries to Determine their Role in the Transmission of Mosquito Borne Diseases in Karachi (Paper Presenter), Dept. of Geographer, University of Karachi, April 21 - 23, 2018.

"Mapping Spatial Distribution of Species Using MAXENT Software" Post Conference Workshop as Lab Instructor, University of Karachi, Jan. 21 - 22, 2017.

"Seminar on Road Safety Awareness” in Department of Geography, University of Karachi, October 25, 2017

Seminar on Earth Day, (Organizer and Presenter), Department of Geography, University of Karachi, 22nd April 2017

First South Asian Regional SURE Conference 2017, (Organizer and Session Moderator), Karachi, January 18 - 19, 2017

First South Asian Regional SURE Conference 2017, Assessment of Change in Slum Areas and its Ecological Impacts on Karachi; A Case Study of Lyari River (Presented Two Papers), Karachi, January 18 - 19, 2017

"4th International Conference on Environmental Horizon" in ICEH - 2016, University of Karachi, January 8-10, 2016

Seminar on Earth Day, (Organizer and Presenter), Department of Geography, University of Karachi, 21st-22nd April 2016

"Five Days workshop on Advanced GIS" as Resource Person, University of Karachi, February 5 -9, 2016

2<sup>nd</sup> International Conference on Environmental Horizon "Greening the Blue" (Poster Presentation), Karachi, 1-3 January, 2014

1<sup>st</sup> Annual Conference of Pakistan Aquaculture and Fisheries Society "Aquaculture & Fisheries Development: Opportunities & Challenges", August 16 – 17, 2013. Organized by KU-ORIC

14th All Pakistan Geographical Conference, (Presented two papers) Lahore, March 5-7, 2013

Regional Workshop on "A regional Perspective for Assuring Sustainable Marine Resources" at Pearl Continental, Karachi, 17 – 19 January, 2013, Organized by WWF and CCAP

11<sup>th</sup> Training Workshop on Wetland Management – 2013, held in Department of Zoology, University of Karachi organized by IUCN Commission on Ecosystem Management, The Scientific and Cultural Society of Pakistan

10<sup>th</sup> Training Workshop on Management on Protected Areas – 2012, held in Department of Zoology, University of Karachi organized by IUCN Commission on Ecosystem Management, The Scientific and Cultural Society of Pakistan

First National Conference on Space Sciences (NCSS), Presented a paper on Mosquito ecology held in ISPA, University of Karachi at 08 -09 2012

Workshop on Exploring Turtle Nesting Habitat, A Workshop Project Jointly organized by Shehri-WWF Pakistan, June - 2011

National Workshop on the Role of GIS/RS for the Sustainable Land Management Programme in Pakistan (SLMP), Organized by GEF (UNDP) & SLMP (MoE, GOP), held in Margala Hotel, Islamabad, December 7-8, 2010

Presented a Paper in Urban and Regional Planning for Globalizing World, Urban Environment as an Ideal Mosquito Habitat: A Case Study of Health Planning in Karachi, held in NED University of Eng. & Tech., Karachi, May 30, 2009



13<sup>th</sup>All Pakistan Geographical Conference, (Presented two papers), Karachi, December 22-25, 2008

### **BOOK/ BOOK CHAPTER**

Kazmi, J. H., Khan, M. & Shaikh, S. (2022) Oxford School Atlas for Pakistan, Oxford University Press, Pakistan

Kazmi, J. H., Qureshi, S. & Shaikh, S. (2010) Role of Spatial Technology (GIS and RS) in Sustainable Management of Land Resources, GEF (UNDP) & SLMP (MoE, GOP)

Kazmi, J. H., Shaikh, S. (2009) Ecological and Socio-Economic Evaluation of the use of *Prosopis juliflora* for Bio-Char Production in Pakistan,

### **CONTINUING EDUCATION**

- “Deep Learning Using ArcGIS Pro”, Online Course, ESRI USA, December 23, 2022.
- “Remote Sensing Application using Google Earth Engine”, 3 days online Training sessions, in Collaboration of Dept. of Geography, The University of the Punjab and Dept. of Geography, The Islamia University of Bahawalpur, June 24 – 26, 2022.
- “ProQuest Dissertations and Thesis – Overview and Training”, ProQuest & Higher Education Commission, Pakistan, March 8, 2022 (online).
- “The Art of Academic Honesty: Plagiarism unpacked”, ProQuest & Higher Education Commission, Pakistan, January 25, 2022 (Online).
- “Introduction to 3D Visualization”, Online Course, ESRI USA, January 12, 2022
- “ArcGIS Urban Basics”, Online Course, ESRI USA, January 05, 2022
- “Spatial Data Science: The New Frontier in Analytics” (MOOC), Online Course, ESRI USA, December 13, 2021
- “Going Places with Spatial Analysis” (MOOC) Online Course, ESRI USA, November 7, 2021
- “Imagery in Action”, (MOOC) Online Course, ESRI USA September 17, 2021
- “ArcGIS online Basic”, online Course, ESRI USA, June 21, 2020
- “Python for Everyone”, online Course, ESRI USA, June 17, 2020
- Workshop on " Awareness in Scientific Writing" Department of Mathematics, University of Karachi, 24 February, 2016
- Workshop on " Thesis Formatting Techniques, ORIC, University of Karachi, Oct. 27, 2016.
- " Workshop on Herbarium Techniques" , Center of Plant Conservation, University of Karachi, Nov. 23, 2015.
- "Workshop on First Aid, Emergency Preparedness and Scouting" University of Karachi, September 9, 2015.
- Seminar on "Endnote: The Citation Management Software", University of Karachi,, February 26, 2015
- “Workshop on Data Analysis Using SPSS - 18”, University of Karachi, March. 20 – 22, 2014
- “Workshop on Academic Integrity and Plagiarism”, University of Karachi, Feb. 12, 2014
- Research methods II, Dean Faculty of Science, University of Karachi, Jan – May, 2009
- “Workshop on landscape ecology & challenges of global environmental challenges”, University of Karachi, Feb. 20 – 22, 2009

- “Training Course on Image Processing through ER- Mapper”, Pakistan Space and Upper Atmosphere Research Commission, Jan. 26-30, 2009
- Research Methods I, Dean Faculty of Science, University of Karachi, Feb – May, 2008
- “ Customization on VBA programming in ArcGIS”, Department of Geography, University of Karachi, Sept. 15 – Oct. 15, 2006
- “Introduction to ArcView GIS”, Department of Geography, University of Karachi, July 05-25 2005

## PROFESSIONAL TRAININGS CONDUCTED

<b>Lab Instructor</b>	GIS and Drone Course
<b>Lead Instructor</b>	Foundation of GIS, GIS Department of SSGC, organized by SPARK, held from September 10 -13, 2014
<b>Lead Instructor</b>	Foundation of GIS and Advanced GIS, GIS Department of SSGC, organized by SPARK, held from September 05 -15, 2013
<b>Lead Instructor</b>	Foundations of GIS, held in Institute of Space and Planetary Astrophysics, from July10 -15, 2012
<b>Lead Instructor</b>	Digital Cartography Course, Department of Geography, GC University, Lahore , held from April 18 -23, 2012
<b>Senior Instructor</b>	Introduction to GIS, 20-25 March, 2010, UmairBasha Institute of Technology, University of Karachi
<b>Senior Instructor</b>	Introduction to ArcView GIS, 12-16 June 2008, Department of Geography, University of Karachi, Karachi
<b>Lab Instructor</b>	Digital Cartography, 16-22 Dec. 2006, Department of Geography, University of Karachi, Karachi
<b>Lab Instructor</b>	Introduction to GIS, July 7-15, 2006, NED University of Engineering and Technology, Karachi

## COURSES TAUGHT (at Graduate/ Post Graduate Level)

Environmental management	Practical Work
Remote Sensing (BS Level)	Practical Work
GIS (BS and MS Level)	Practical Work

Urban Ecology	Theory & Practical
Research Methodology	Theory & Practical
Cartography	Theory & Practical
Map and Air Photo Analysis	Theory & Practical
Regional Geography	Theory & Practical
Physical Geography	Theory & Practical
Human Geography	Theory & Practical
Advanced Remote Sensing (MS Level)	Theory & Practical
Field Techniques	Field Report