

## Contact

(LinkedIn)

## Top Skills

Sustainability  
Sustainable Design  
Academic Administration

## Languages

English  
urdu

## Certifications

Viscoplastic Shift Model  
GPR: What can squiggly lines tell us  
Free Pavement Management Software  
Pavement Design and Infrastructure Material Research

## Honors-Awards

Silver Medal in MSc Civil Engineering  
Best Qari 2007  
Best Qari 2009  
Vice President Bazm e Adab [Debating Society]

## Publications

Investigating Tools for Sustainability Assessment of Road Pavements in Europe  
Unveiling the Benefits of Engineered Crumb Rubber for Asphalt Mixtures via Performance-Related Characterization: Rutting Behavior †  
Comprehensive Study on the Performance of Waste HDPE and LDPE Modified Asphalt Binders for Construction of Asphalt Pavements Application

# Usman Ghani

PhD Researcher at University of Palermo Italy  
Italy

## Summary

Working as a PhD Student in Department of Engineering, at Università degli Studi di Palermo and Research Scholar at North Carolina State University United States

## Experience

Università degli Studi di Palermo  
Doctoral Researcher  
November 2021 - Present (2 years 5 months)  
Palermo, Sicily, Italy

PhD- Transportation Infrastructure Engineering and Geomatics

North Carolina State University  
Research Scholar  
October 2023 - February 2024 (5 months)  
North Carolina, United States

CECOS University of Information Technology and Emerging Sciences  
6 months

Lecturer  
June 2021 - November 2021 (6 months)  
Peshawar District, Khyber Pakhtunkhwa, Pakistan

Academic Coordinator  
June 2021 - November 2021 (6 months)  
Peshawar, Khyber Pakhtunkhwa, Pakistan

Preparation of Academic calendars for Bachelor of Technology students  
Preparation of Summer and Spring Time Tables  
Preparation of Exam Date sheets  
Courses Registrations  
Industrial Training arrangement for students  
Study Tours arrangements

Effect of Mineral Fillers On the Performance of Hot Mix Asphalt (HMA)

Road Traffic Accident Analysis and Identification of Black Spot Locations on Highway

Maintenance and record keeping of Course folders, Student Study Tours, and semester wise enrollment of students

## Abasyn University

Lecturer

February 2019 - September 2020 (1 year 8 months)

Pakistan

SPRING-2019

- Taught (CE-413) Highway & Traffic Engineering course
- Taught (CE-424) Highway materials and construction course
- Researching and implementing cost-saving initiatives and creating fresh new approaches to long- Lasting pavement performance.
- Supervision of final year project under the title" To Check the Volumetric properties and performance of Hot Mix Asphalt (H.M.A) using High- & Low-Density Polyethylene".
- Supervision of final year project under the title" Graphene as a filler material in bituminous mixes"
- Performing various administrative works, including paperwork to Higher Education Commission Pakistan.

Post Graduate Courses

- (CE-604) Pavement Analysis and Design

FALL-2019

- Taught (CE-311) Civil Engineering drawing & Graphics Course
- (CE-304) Geo-Informatics

Post Graduate Course

- (CE-602) Pavement Construction and Maintenance

SPRING-2020

# CS-116 Computer Fundamentals and Programming

# Supervision of final year project under the title" Rutting Susceptibility of Asphalt Mixtures involving reclaimed asphalt using simple performance testing"

Post Graduate Course

(CE-601) Pavement Structures Materials and Design

SUMMER- 2020

- CE-212 Engineering Surveying-I

- CE-202 Engineering Surveying
- CS-110 Fundamentals of Computing & Programming

FALL- 2020

- Taught (CE-301) Civil Engineering materials course
- (CE-304) Geo-Informatics

Post Graduate Course

- (CE-602) Pavement Construction and Maintenance

SPRING-2021

- Taught (CE-413) Highway & Traffic Engineering course
- Taught (CE-424) Highway materials and construction course
- Recently working on research under the title " To study the effect of rheological, dynamic viscosity measurements and morphological performance of polymers modified binder ".

Post Graduate Course

Taught (CE-605) Highway materials and construction course

University of Engineering and Technology, Lahore

Research Associate

September 2018 - February 2019 (6 months)

Lahore, Pakistan

Fall 2018

- Taught (TE-461) Pavement Design & Construction course.
- Taught (CE-343) Engineering Hydrology course.
- Demonstration & Practical performance of Lab Work in Transportation Engineering Laboratory on Internationally approved Mixes Like Super pave and Dense Based Macdam.
- Worked on the project "Mobility Management Plan for Improvement of Traffic Management Capacity in Lahore Central Area supervised and Funded by Japan International Cooperation Agency (JICA).
- Disseminated research findings to various personnel in different formats, including white papers, presentations and spreadsheets.
- Received a certificate on completing the Outcome Based Education Teachers Training workshop at UET Lahore Pakistan

National University of Computer and Emerging Sciences

Lab Engineer

September 2017 - September 2018 (1 year 1 month)

Lahore, Pakistan

Fall 2017

- Demonstration and performance of Lab Practical's related to Highway & Traffic Engineering Laboratory (VL-404).
- Demonstration & hands on experience to the students using AutoCAD Civil 3D for Geometric Design of Highways.
- Laboratory Supervision of final year project under the title "Effects on compaction of sub-grade in road construction using treated wastewater with comparison to clean water"

Spring 2018

- Laboratory Supervision of Ms Civil Engineering Thesis under the title "Comparison of Crumb Rubber and Fly Ash on the effect of bituminous properties".
- Demonstration & Hands on Experience of Auto CAD civil 3D 2013 in Civil Engineering Drawing & Graphics (VL-202), for students to draft assemblies, models and other technical drawings

## Allied Consultant Engineering

### Planning Engineer

August 2016 - September 2017 (1 year 2 months)

Lahore, Pakistan

- Prepared Geo-technical reports for Sub grade evaluation.
- Worked on the project Revamping & Rehabilitation of the district head quarter hospitals in different districts of Punjab.
- Independently prepared and modified drawings, specs, calculations and graphs.
- Documented design using CAD drawings and schematics.
- Planned engineers liaise with construction managers and sub-contractors.
- Geometric design of small district roads.
- Formal letter writing.
- Worked on the Project under the title " Introducing smart Cities concept in Pakistan".

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## Education

### University of Palermo

Doctor of Philosophy - PhD, Transportation Infrastructure Engineering and Geomatics · (November 2021 - November 2024)

### National University of Computer and Emerging Sciences

Master's Degree, Civil Engineering · (2016 - 2018)

University of Engineering and Technology, Taxila  
Bachelor's degree, Civil Engineering · (2012 - 2016)

Army Burn Hall College For Boys Abbottabad  
High School, Higher Education/Higher Education  
Administration · (2006 - 2011)