

# Prof. Dr. Ghous Bakhsh Narejo

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## Profile Summary

I strive to contribute towards organization in order to improve it by attaining efficiency. I had worked at various levels in academia and the field of electrical power for last 34 years. My professional experience spans over more than three decades with a mix of professional experience in power and academia starting the position of senior lecturer. I am currently working as Professor and Chairperson, Electronic Engineering Department, NED University, Karachi, Pakistan. I have carried out the skills set learned in the field to be implemented at academics particularly in areas of academic management, teaching and research. I worked on improving the academic quality in following areas: courses design and approvals as well as implementations in bachelors, masters and PhD levels; teaching and conducting research at bachelors, masters and PhD levels; academic management at various positions resulting in the approval and implementations of quality syllabi, and research excellence of passed out students and scholars at above levels.

## Professional Work Experience

### **Water and Power Development Authority**

Worked as Junior Engineer Power, Different Stations  
Across Pakistan.

[April 1991-1999]

### **NED University of Engineering & Technology**

Currently working as Chairman, Department of Electronic Engineering,  
NED University of Engineering & Technology, Karachi

[May 2001- To date]

## Education

[2007-2010]

### **Doctorate of Philosophy in Electrical Engineering (PhD)**

**Best Graduate Medalist**

Michigan Technological University, USA

[2003-2006]

### **Master of Engineering in Electronic Engineering (ME)**

**(Microelectronics)**

NED University of Engineering & Technology, Karachi, Pakistan

[1985-1990]

### **Bachelor of Electronic Engineering (BE)**

Mehran University of Engineering & Technology, Pakistan

**Best Graduate Gold Medalist**

## Certifications/Achievements

Feb, 2019

### **Seminar on Optimized Implementation of Efficient Control Algorithm for Hybrid Micro Grid at Public & Private HEI**

Indus University (Karachi, Pakistan)

Nov, 2018

**17<sup>th</sup> World Wind Energy Conference & Expo 2018**

Movenpick (Karachi, Pakistan)

Feb, 2018

**International Conference on Emerging Trends in Telecommunication and Electronic Engineering**

NED University of Engg. & Tech. (Karachi, Pakistan)

Apr, 2017

**International Conference on Innovations in Electrical Engineering & Computational Technologies (ICIEECT 2017)**

Indus University (Karachi, Pakistan)

Jan, 2017

**Renewable Energy Based Power Systems: Research Models, Indigenous Analysis & Design Approaches**

Indus University (Karachi, Pakistan)

Dec, 2016

**HEC Indigenous on Campus Training on Outcome Based Education**

NED University of Engg. & Tech. (Karachi, Pakistan)

Oct, 2016

**CPD Seminar on “Research on Modern Power System Analysis, Design & Modeling”**

Indus University (Karachi, Pakistan)

Oct, 2015

**HEC Indigenous on Campus Training on Financial Management**

NED University of Engg. & Tech. (Karachi, Pakistan)

Mar, 2014

**29<sup>th</sup> Multi-Topic International Symposium**

IEEEP (Karachi, Pakistan)

Feb, 2012

**Workshop on Assistive Robots**

TE Links (Karachi, Pakistan)

Dec, 2011

**Internal QMS Auditor Course**

Lloyd's Register (LRQA) (London)

2009 - 2010

**IPS Student Advisory Board**

Michigan Technological University (Michigan, USA)

## Professional Development/ Trainings

2024

- Revamped QA Framework: Collaborative Pathways to Sustainable Development Goals
- An Awareness about University-wide Policies/ Systems

2023

- Health & Safety Management System
- International Ranking Criteria: KPI & Goal Setting
- Revamped QA Framework: Collaborative Pathways to Sustainable Development Goals
- Managing Health and Safety
- Briefing/ Feedback Session on QSP for Health, Safety & Environment (HSE)

2022

- Session on QSP 16 & Revised Risk Resister

2021

- Assessment of SAR as Per HEC Guidelines
- HEC's PhD Policy 2020-21
- Development of SAR Report

2020

- Development of SAR as per PEC Guidelines
- OBE Based Student Evaluation

2019

- Examination Paper Setting as per OBE System
- Awareness of Intellectual Property and Commercialization Policy

## Professional Membership

- Pakistan Engineering Council (PEC)

## Social Membership & Co-curricular / Leisure Activities

- Member, Lunar Operating Guidelines for Infrastructure Consortium (LOGIC)
- Reading Books, Journals

## Research Projects

Total Ph.D. Projects:	06 Nos.
PhD Projects Completed:	05 Nos.
PhD Projects in Progress:	01 No.

## Completed Ph.D. Dissertations

- Optimized Implementation of Efficient Control Algorithm for Islanded Microgrid (3.0 Million Pkr.)
- Power Efficient Continuous Time Filters for Portable Biomedical Applications (3.0 Million Pkr.)
- An Image Processing Algorithm to Pre-Process, Segment, Classify and Grade the Liver Cancer, Hepatocellular Carcinoma (HCC) Type (3.0 Million Pkr.)

- Development of a methodology to enhance the effect of nano structure based photo voltaic cell (1.0 Million Pkr.)
- Development of a multi-channel nanosensor based portable system for diagnosis and detection of analytes in human blood (1.0 Million Pkr.)

## Ph.D. Dissertations

- Multi-objective Optimization Techniques for Improving the Performance Parameters of Fast Electric Vehicle Charging Station (1.0 Million Pkr.)

## Research Publication

- Ghous B Narejo, Dr. Warren F. Perger, First-principles computation of second-order elastic constants and equation of state for tetragonal BaTiO<sub>3</sub>, Chemical Physics Letters, Volume 493, Issues 4–6, Pages 263–268, 25 June 2010. **(Impact factor:1.860 ) JCR**
- Dr Ghous B Narejo, Dr. Warren F. Perger, Optimized crystalline structure and properties of the cubic and tetragonal BaFeO<sub>3</sub>, NED University Research Journal, 2012. **(HEC Category X)**
- Dr Ghous B Narejo, M. Ahmed Dawood, Power Supply Based On Thermocouples with Cryogen Contact Cold Junction, NED University Journal of Research, 2013. **(HEC Category X)**
- Dr. Ghous Bakhsh Narejo, Engr. Fawad Azeem, An Energy Policy Analysis and Proposed Remedial Actions to Reduce Energy Crises in Pakistan, Mehran University of Engineering and Technology Research Journal, ISSN: 0254-7821, 2016. **(HEC Category X)**
- M. Haziq K.U. Azman, F. Azeem, G. B. Narejo, M. K. Joyo, M. H. Jaffery, M. I. B. A. Bakar, A. Tariq, An Analysis of Islanded Hybrid Microgrid Implementation Using Canals as Micro hydro Power Source with Solar PV for Rural Areas of Pakistan”, Sindh University Research Journal, ISSN:1813-1743, 2016. (HEC Category X)
- Ayesha Amir Siddiqi, Ghous Baksh Narejo, Shahnila Zardari, Mashal Tariq, and Shehla Andleeb , Application of Image Processing Algorithms for Brain Tumor Analysis in 2D and 3D Leading to Tumor’s Positioning in Skull: Overview, Mehran University Research Journal of Engineering & Technology Research Journal, July, 2016. (HEC Category X)
- Ayesha Amir Siddiqi, Ghous Baksh Narejo, Areeba Mehmood Khan, Early Skin Tumor Detection from Microscopic Images through Image Processing, Mehran University Research Journal of Engineering & Technology Research Journal, July, 2016. (HEC Category X)
- Mashal Tariq, Ayesha A. Siddiqi, Ghous Bakhsh Narejo, Shehla Andleeb, A Cross Sectional Study of Tumors Using Bio-Medical Imaging Modalities, Current Medical Imaging Reviews, Vol 13, 2017. (Impact factor:0.299) JCR
- S Bano, Ghous Bakhsh Narejo, SMU Ali Shah, Power Efficient Fully Differential Bulk Driven OTA for Portable Biomedical Application, , Electronics 7 (3), MDPI, 14, March, 2018. (Impact factor: 2.110) JCR
- Saleha Bano, Ghous Bakhsh Narejo, S. M. Usman Ali Shah, Low Voltage Low Power Single Ended Operational Transconductance Amplifier for Low Frequency Applications, Wireless Personal Communications, Springer April 2018. (Impact factor: 0.458) JCR
- Fawad Azeem, Ghous Bakhsh Narejo, Energy Efficiency, Integration of renewable distributed generation with storage and demand side load management in rural islanded microgrid, Netherlands, Springer, November, 2018 (Impact factor:1.634) JCR
- Saleha Bano, Ghous Bakhsh Narejo, Dr. Syed Muhammad Usman Ali, Nanopower sub threshold 4th order filter and its applications to ECG systems, International Journal of Electronics and Communications, JCR, impact factor 2.115
- Saleha Bano, Ghous Bakhsh Narejo, Dr Syed Usman Ali, 7.2 nW 68 Db DR 4th order self-compensated LFP for portable ECG Applications, Advanced Biomedical Engineering, May, 2019 SCI
- Ayesha Siddiqui, Ghous Bakhsh Narejo, Analysis of Abdominal Computed Tomography Images For Automatic Liver Cancer Diagnosis Using Image Processing Algorithm, Current Medical Imaging Reviews, (Impact factor:0.299) April 2019. JCR.

- Ayesha Amir Siddiqi, Ghous Bakhsh Narejo, Mashal Tariq and Adnan Hashmi, Investigation Of Histogram Equalization Filter For CT Scan Image Enhancement, Biomedical Engineering: Applications, Basis and Communications, 9 August 2019, SCI.
- Fawad Azeem, Ghous Bakhsh Narejo, A Fuzzy Based Parametric Monitoring And Control Algorithm For Distinctive Loads To Enhance The Stability In Rural Islanded Microgrids, Facta Universitatis, Series: Electronics and Energetics, Accepted, 2019, SCI
- Ghous Bakhsh Narejo, Dr. Warren F. Perger First-principles computation of second-order elastic constants and equation of state for Rutile TiO<sub>2</sub>, Physics Research International Volume, 2011. SCOPUS
- Ghous Bakhsh Narejo, Ayesha Amir Siddiqi and Adnan Hashmi, A Novel Image Processing Algorithm to Automatically Extract and Classify Liver Bearing Tumours Using Pattern Recognition and Fuzzy Transform, Biomedical Engineering: Applications, Basis and Communications, 30-12-2021, SCI
- N.Pirzada, Ghous Bakhsh Narejo, S. U. A. Shah, T. A. K. Qasuria, A Novel Fabrication Approach for Improving the Efficiency of FAPbI<sub>3</sub> Based Perovskite Solar Cells, Journal: Journal of the Chemical Society of Pakistan, Impact factor: 0.698

## Books and Book Chapters

- Microgrids: Design, Challenges, and Prospects, Editor: Dr. Ghous Bakhsh Narejo, Biswaranjan Acharya, Ranjit Singh Sarban Singh, Fatma Newagy, Copyright Year 2022.
- Chapter: Robotics and Machine Learning, Dr. Ghous Bakhsh Narejo, Book Privacy Vulnerabilities and Data Security Challenges in the IoT Edition 1st Edition, First Published 2020, Imprint CRC Pres, Pages 16, eBook ISBN 9780429322969.
- Chapter: AI in Healthcare, Dr. Ghous Bakhsh Narejo, Book Privacy Vulnerabilities and Data Security Challenges in the IoT, Edition 1st Edition, First Published 2020, Imprint CRC Press, Pages 16, eBook ISBN 9780429322969.

## Conference Papers

- Y. Rehman, Ghous Bakhsh Narejo, S Zaidi, An experiment for testing efficiency of effective teaching model and comprehensive use of limited resources, Teaching, Assessment and Learning for Engineering (TALE), Volume 2011 (2011), Article ID 536183, 7 pages.
- Ghous Bakhsh Narejo, S Bharucha, Real Time Finger Counting and Virtual Drawing Using Color Detection and Shape Recognition, 2013, Information & Communication Technologies (ICICT), Karachi, Page(s): 1 – 6, Print ISBN: 978-1-4799-2621-3, INSPEC Accession Number: 14080060.
- Ghous Bakhsh Narejo, Engr. Fawad Azeem, and Yasir Ammar, A survey of Control Strategies for Implementation of Optimized and Reliable operation of Microgrid in Islanded Mode”, IEEE, Power Generation and Renewable Energy Technologies Conference June 2015 Islamabad.
- Ghous Bakhsh Narejo, Engr. Fawad Azeem, Performance Evaluation of Solar Flat Plate Collector Under Climatic Conditions of Islamabad Pakistan, 6th International Conference on Energy Research and Development Kuwait, 15-16 March 2016.
- Saleha Bano, Ghous Bakhsh Narejo and S.M. Usman Ali Shah, ‘Single CDBA Based Bilinear Current Mode Canonic Universal Filter’, IEEE Computing, Electronic and Electrical Engineering (ICE Cube), 2016, 11-12 April, Quetta, Pakistan. 2016.7495250.
- Ghous Bakhsh Narejo, Fawad Azeem, Waqas Azeem, Renewable energy-based power systems: models, indigenous analyses, ICIEECT, IEEE, Karachi, May 2017.
- Raza Jafri and Ghous Bakhsh Narejo (2023) “A Novel Yagi-Uda Antenna Based Wireless Power Transmission (WPT) System Using Passive Reflectors”, 2nd International Conference on Emerging Trends in Electronics and Telecommunications Engineering (INTERACT-2023), 15th -16th March 2023, NED University of Engineering and Technology Karachi. <https://www.mdpi.com/2673-4591/32/1/19/pdf>.

- Raza Jafri and Ghous Bakhsh Narejo “Performance Comparison of Three Antennas with Passive Reflecting Walls for Wireless Power Transmission” Journal of Independent Study and Research Computing, Volume 21, Issue 1 of the year 2023, SZABIST.

## Technical Skills

- Writing research articles
- Writing research proposals
- Curriculum development
- Academic management
- Career counselling
- Academic counselling
- Conducting academic quality audit
- Designing academic syllabi
- OBE based teaching
- OBE curricula design
- OBE assessment

## Strengths

- Self-motivated
- Hard worker
- Committed
- Passionate
- Problem solver
- Dedicated

## Personal Skills

- Team work
- Creative
- Innovative
- Time management
- Optimistic
- Hardworking
- Dedicated

## Personal Information

- Father’s Name : Muhammad Ibrahim Narejo
- Passport : AB9989565
- Date of birth : 02-01-1966
- Marital Status : Married
- Address : Flat No.601, Tricon Garden, Bath Island, Clifton, Karachi, Sindh, Pakistan

## Reference

Professional personal references will be provided upon request