

CURRICULUAM VITAE

Engr. Syed Nabeel Husnain



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Additional Information
S/o: Syed Ali Haider
DOB: November, 14-1987
NIC: 38401-3371867-9
Religion: Islam
Nationality: Pakistani
Domicile: Sargodha
Marital status: Married

Objective:

To obtain a challenging position in a reputed organization, an organization that recognizes dedication, devotion and achievements with the ample of opportunities of advancement in my skills and experience.

Qualification:

Certificate	Board/ University	Marks Obtained/ CGPA	%age	Passing Year
PhD (Agricultural and Biosystems Engineering)	University of Kassel, Germany	1.37/4.00	magna cum laude	2024
M.Sc. (Hons.) Agri. Engg.	University of Agriculture, Faisalabad	3.77/4.00	79.00	2015
B.Sc. Agri. Engg.	University of Agriculture Faisalabad	3.50/4.00	73.79	2011
H.S.S.C	BISE Sargodha	743/1100	67.55	2007
S.S.C	BISE Sargodha	642/850	75.53	2004

PhD Research work on “Development of Decentralized Solar Assisted Yogurt Processing Unit for the production of on-farm high-quality yogurt.”

M.Sc. (Hons.) Research work on “Development and field experiments of solar distillation system for the extraction of essential oils using direct steam injection”

Professional Experience:

- Working as “Lecturer” since September 08, 2014 to date in the Department of Energy Systems Engineering, Faculty of Agricultural Engineering & Technology, University of Agriculture, Faisalabad-Pakistan
- Worked as “Assistant Executive Engineer” since June 11, 2012 to September 07, 2014, to conduct the practical classes of different courses, in the Department of Farm Machinery & Power, Faculty of Agricultural Engineering & Technology, University of Agriculture, Faisalabad-Pakistan

National and International Professional Trainings:

- I have participated in the Agridata and Smart Stats Bootcamp for Faculty Funded by Endowment Fund Secretariat, UAF held on December 16-17, 2024
- I have participated in 20 days training program and summer school titled “Agricultural Technology and Engineering in Developing Countries” held in Witzenhausen (Germany), organized by University of Kassel, Germany from November 1, 2013 to November 20, 2013.
- I have also visited the world’s largest agricultural engineering machinery exhibition titled “AGRITECHNICA 2013” held in Hannover (Germany) from November 12, 2013 to November 16, 2013
- Participated in 2 months training program about “Biogas technology for developing countries” in Biogas Institute of Ministry of Agriculture (BIOMA), Chengdu-China from May 14, 2013 to July 08, 2013
- Participated in 20 days international workshop on the construction of Scheffler fixed focus concentrator under ICDD funded project titled “Value addition to agricultural products using solar energy” with German Scientists Mr. Wolfgang Scheffler and Mrs. Hieke Hoedt
- I have participated and completed 7 days training program titled “Training of Trainers (ToT) for Biogas Plants Construction” Organized by Punjab Skill Development Fund (PSDF), from January 5, 2015 to January 11, 2015.
- I have worked as an Instructor/Trainer in the training course of “Skills for Biogas Plants” for biogas plant Technicians and Supervisors under Punjab Skills Development Funds (PSDF) held at University of Agriculture, Faisalabad-Pakistan, conducted from January 15, 2015 to February 15, 2015
- I was deputed with Chinese team for the construction of “Bag Type Biogas Plants” by the worthy Vice Chancellor, UAF.
- Have an experience of 2 month working in Nuclear Institute of Agricultural Botany (NIAB), Faisalabad
- I have participated and completed 5 days training program titled “Indigenous on Campus Training (IOT)” under modern university governance program organized by University of Agriculture Faisalabad, from August 25-29, 2015
- I have participated and completed 3 days training program titled “An Introduction to LATEX.UAF Synopsis & Thesis” sponsored by U.S.-Pakistan Center for Advance Studies in Agriculture and Food Security (USPCAS-AFS) and organized by University of Agriculture Faisalabad, from July 26- 28-29, 2017

Academic Honor:

- Book edited titled “Basics of Agriculture” 7th Edition 2016, Agrihunt Publishers
- First position in country report presentation in China during the International training on “Biogas Technology in Developing Countries” out of 10 international countries in (BIOMA) Chengdu, China.
- Merit Scholarship Holder in B.Sc. Agricultural Engineering throughout the degree
- Registered Engineer with “Pakistan Engineering Council” AGRI/3306

Publications:

- Qamar, Z., Munir, A., Amjad, W., Langrish, T., Husnain, S. N., & Hensel, O. (2025). Energy and exergy analyses of a solar assisted milk powder spray dryer. *Thermal Science and Engineering Progress*, January 2025. <https://doi.org/10.1016/j.tsep.2024.103131>
- Amjad, W., Shahid, M., Asghar, F., Munir, A., & Husnain, S. N. (2024). Integrated Assessment of a Combined Cycle Power Plant Using Experimental and Computational Energy Auditing Approaches. 2(1), 1–13.
- Abid, M., Wu, J., Yuanyuan, Y., Ajmal, Z., Mehmood, T., Husnain, S. N., & Zhou, X. (2024). Enhanced anaerobic digestion of freezing and thawing pretreated cow manure with increasing solid content: kinetics and microbial community dynamics. *Scientific Reports*, 14(1), 25579. <https://doi.org/10.1038/s41598-024-76392-z>
- Asghar, F., Hussain, M. I., Alshahrani, F. A., Akhtar, M. I., Amjad, W., Shahzad, M., Husnain, S. N., & Lee, G. H. (2024). Technoeconomic analysis of standalone hybrid renewable energy systems for telecommunication sector under different climatic conditions in Saudi Arabia. *Energy Reports*, 11(September 2023), 4067–4084. <https://doi.org/10.1016/j.egyr.2024.03.055>
- Husnain, S.N., Munir, A., Amjad, W., Majeed F., & Hensel, O. (2023) Comparative quality analysis and economic feasibility of solar assisted yogurt processing unit for decentralized dairy value chain. *Sci Rep* 13, 6878 (2023). <https://doi.org/10.1038/s41598-023-34032-y>
- Sultan, U., Khan, A. A., Husnain, S. N., Zohaib, M., & Hashim, N. (2023). Multi crop high efficiency seed drill with solar hybrid seed metering: A step toward precision and sustainability. *Frontiers in Sustainable Food Systems*, 6, 1081122. <https://doi.org/10.3389/fsufs.2022.1081122>
- Majeed, F., Husnain, S. N., Raza, A., Sultan, M., Munir, A., Hensel, O., & Nasirahmadi, A. (2022). Energy and exergy analysis of a solar coffee roaster using concentrating scheffler-reflector. *Thermal Science and Engineering Progress*, 34, 101407. <https://doi.org/10.1016/j.tsep.2022.101407>
- Husnain, S. N., Amjad, W., Munir, A., & Hensel, O. (2022). Energy and exergy based thermal analysis of a solar assisted yogurt processing unit. *Front. Energy Res*, <https://doi.org/10.3389/fenrg.2022.887639>
- Husnain, S. N., Amjad, W., Munir, A., & Hensel, O. (2022). Development and Experimental Study of Smart Solar Assisted Yogurt Processing Unit for Decentralized Dairy Value Chain. 1–26. *Sustainability*, 14, 4285. <https://doi.org/10.3390/su14074285>
- Amjad, W., Raza, M. A., Asghar, F., Munir, A., Mahmood, F., Husnain, S. N., Hussain, M. I., & Kim, J.-T. (2022). Advanced Exergy Analyses of a Solar Hybrid Food Dehydrator. *Energies*, 15(4), 1505. <https://doi.org/10.3390/en15041505>
- Noor-uz-zaman, M., Munir, A., Husnain, S. N., & Amjad, W. (2017). Energy consumptions and PV system cost comparison between energy audited and non-energy audited facility . October 2017, 187–190. <https://doi.org/10.15017/1906418>
- Husnain, S. N., Munir, A., Hussain, S. F., & Faheem, M. (2014). Quality Drying of Ripened Chilies Using a Glass Solar Tunnel Dryer. *Journal of Global Innovations in Agricultural and Social Sciences*, 2(1), 16–22. <https://doi.org/10.17957/jgiass/2.1.444>

Abstract published:

- Abstract published in International Conference on Geo-informatics for Water and Agricultural Resource Management (ICGWARM) titled “Assessment and Estimation of Actual Crop Water Demand Using Satellite Data” with Paper ID: ICGWARM-1-CWD-2, held on April 24-26,

2024, organized by NCGSA-Agricultural Remote Sensing Lab, Department of Irrigation & Drainage, Faculty of Agri. Engineering & Technology, University of Agriculture, Faisalabad, Pakistan.

- Abstract published in International Conference on Geo-informatics for Water and Agricultural Resource Management (ICGWARM) titled “Rain Water Harvesting: A review” with Paper ID: ICGWARM-9-IAP-9, held on April 24-26, 2024, organized by NCGSA-Agricultural Remote Sensing Lab, Department of Irrigation & Drainage, Faculty of Agri. Engineering & Technology, University of Agriculture, Faisalabad, Pakistan.
- Abstract published in International Conference on Geo-informatics for Water and Agricultural Resource Management (ICGWARM) titled “A review of Rooftop Rain Water Harvesting” with Paper ID: ICGWARM-9-IAP-12, held on April 24-26, 2024, organized by NCGSA-Agricultural Remote Sensing Lab, Department of Irrigation & Drainage, Faculty of Agri. Engineering & Technology, University of Agriculture, Faisalabad, Pakistan.
- Husnain, S.N., Hensel, O., Munir, A. (2019). Design and Development of Solar Assisted Yogurt Processing Unit for the Production of On-Farm High Quality Yogurt. International Conference on Green Energies Technologies: Opportunities and Challenges, 29-30 October, 2019. ISBN: 978-969-9035-18-0
- Husnain, S.N., Hensel, O., Munir, A., Farid, M.U., Amjad, W., Ghafoor, A. (2019). Design and development of solar based milk pasteurization unit using Scheffler reflector as a heat source. International Conference on Green Energies Technologies: Opportunities and Challenges, 29-30 October, 2019. ISBN: 978-969-9035-18-0
- Abstract published in “Abstract book of International Workshop on “Sustainable Energy Solutions for Community Development in Pakistan” titled “Use of hyperspectral imaging (HSI) for energy optimization of an industrial drying process” with ISBN 978-969-9035-13-5
- Abstract published in “Abstract book of International Workshop on “Sustainable Energy Solutions for Community Development in Pakistan” titled “Stirling engine: A potential solution to energy crises in Pakistan” with ISBN 978-969-9035-13-5
- Abstract published in “Abstract book of International Workshop on “Sustainable Energy Solutions for Community Development in Pakistan” titled “Solar thermal energy storage using phase change materials” with ISBN 978-969-9035-13-5
- Abstract published in “Abstract book of International Workshop on “Sustainable Energy Solutions for Community Development in Pakistan” titled “Energy regeneration in milk pasteurization using high temperature short time (HSTS) method” with ISBN 978-969-9035-13-5
- Abstract published in “Abstract book of International Workshop on “Sustainable Energy Solutions for Community Development in Pakistan” titled “Designing of solar peltier refrigerator to determine the freezing time of the droplets of different solutions” with ISBN 978-969-9035-13-5
- Abstract published in “Abstract book of International Workshop on “Sustainable Energy Solutions for Community Development in Pakistan” titled “Designing of solar peltier refrigerator to determine the freezing time of the droplets of different solutions” with ISBN 978-969-9035-13-5
- Abstract published in Abstract book of International Conference of Biochemistry, Biotechnology, and Biomaterials” titled “Application of Natural and Charred Orange Peel for the Immobilization of Arsenic (v) from Aqueous Solutions.”
- Abstract published in Abstract book of 16th International Congress of Soil Science “Healthy Soil for Food Security” titled “Orange peel: A potential bio waste to remove As (V) from aqueous environments”
- Abstract published in “Abstract book of International Workshop on Renewable Energy Technologies for Community Development in Pakistan” titled “Combining heat pump with

solar collectors and buffer storage for sanitary hot water production in hospital” with ISBN 978-969-9035-11-1

- Abstract published in “Abstract book of International Workshop on Renewable Energy Technologies for Community Development in Pakistan” titled “Composition and yield based comparative study of solar and conventional distillation systems for Eucalyptus Camaldulensis essential oils” with ISBN 978-969-9035-11-1
- Abstract published in “Abstract book of International Workshop on Renewable Energy Technologies for Community Development in Pakistan” titled “Quality drying of ripened chilies using a glass glazed solar tunnel dryer” with ISBN 978-969-9035-11-1
- Abstract published in “Abstract book of International Workshop on Renewable Energy Technologies for Community Development in Pakistan” titled “Present status and future prospects of biodiesel technology in Pakistan” with ISBN 978-969-9035-11-1
- Abstract published in “Abstract book of International Workshop on Renewable Energy Technologies for Community Development in Pakistan” titled “Microbial Fuel Cells; A technology for energy Recovery from waste water and power generation.” with ISBN 978-969-9035-11-1
- Abstract published in “Abstract book of International Workshop on Renewable Energy Technologies in Pakistan” titled “Development and field experiments of solar distillation system for the extraction of essential oils using direct steam injection” with ISBN 978-969-9035-01-04
- Abstract published in “Abstract book of International Conference on Renewable Technologies in Pakistan” titled “Design and development of solar roasting system for value addition of agricultural products” with ISBN 978-969-9035-05-0
- Abstract published in “Abstract book of International Conference on Renewable Technologies in Pakistan” titled “Design and development of solar assisted milk pasteurizer based Scheffler technology” with ISBN 978-969-9035-05-0

Study Visits:

- University of Kassel, Germany
- “AGRITECHNICA 2013” held in Hannover, Germany
- Biogas Institute of Ministry of Agriculture (BIOMA), Chengdu-China
- Rfhan Maize Product (Pvt.) Ltd.
- AMRI, Faisalabad
- Tarbela Dam
- Ghazi Tractors Limited, DG Khan
- Noorani Industries (Pvt) Limited, Faisalabad
- Taunsa Barrage
- Kashmir Ghee Industries.

Major Subjects Taught:

- Renewable Energy Engineering
- Boiler Engineering and Power Plants
- Engineering Thermodynamics
- Heat and Mass Transfer
- Solar Energy Systems
- Bio Energy Engineering
- Energy Conservation

- Instrumentation and Controls

Conferences/Seminars/Workshops Attended:

- Participated and member of organizing committee in International Conference on “Geo-informatics for Water and Agricultural Resource Management (ICGWARM held on April 24-26, 2024, organized by NCGSA-Agricultural Remote Sensing Lab, Department of Irrigation & Drainage, Faculty of Agri. Engineering & Technology, University of Agriculture, Faisalabad, Pakistan.
- Participated in a project competition of Narowal Science Mela 2024 and CAS Industry Forum at UET Lahore (Narowal Campus) on April 29, 2024
- Participated in two days hands-on CPD training workshop “3D Scanning and Printing for Design of Agriculture Machinery” held on September 25, 2023, Organized by Department of Farm Machinery and Power, UAF
- Participated in one day seminar on Understanding and Implementation of Out Come Based Education held on May 18-19, 2023, Organized by Department of Farm Machinery and Power, UAF
- Participated in an International Conference titled “Green Energies Technologies: Opportunities and Challenges” held on October 29-30, 2019, Organized by University of Agriculture, Faisalabad, Pakistan, ICDD and HEC-Pakistan (Win 3rd position in poster competition)
- I have participated in International Seminar titled “Ensuring Food Security Through Efficient Processing” held on October 16, 2015 and got certificate of participation
- I have participated in International Workshop on “Renewable Energy Technologies for Community Development in Pakistan: (1 CPD point) held on November 04-06, 2015 and got certificate of honor
- I have participated in International Conference on “Soil Sustainability for Food Security” held on November 15-17, 2015 and got certificate
- I have participated in International Seminar on “Risk Management in Agriculture” held on November 28, 2015
- I have participated in one day international seminar on “Irrigation System of Pakistan: Challenges & Opportunities” Organized by WWF-Pakistan, Department of Irrigation and Drainage & Water Management and Research Centre, University of Agriculture Faisalabad, held on February 10, 2016 and got certificate of participation
- I have participated in International Conference of Biochemistry, Biotechnology, and Biomaterials held on February 22-24, 2016
- I have participated in Participated in the 16th International Congress of Soil Science “Healthy Soil for Food Security” held on March 15-17, 2016 and got certificate of participation
- I have participated in “2nd National Stakeholder’s Conference on Precision Agriculture” held on April 16, 2016 and got certificate of participation
- I have participated in Participated in Training Workshop “SPS Compliance through the Fresh Produce Supply Chain” held on August 3-4, 2016 and got certificate of participation
- I have participated in International Workshop on “Sustainable Energy Solutions for Community Development in Pakistan (1 CPD point)” held on November 08-09, 2016 and got certificate of honor

- I have participated in International Entomological Congress (One Exclusive Day on Current Scenario and Management of Pink Bollworm) held on December 16-18, 2016 and got certificate of honor
- I have participated in AgMIP Mid Term Workshop Phase II with theme “Assessing Climatic Vulnerability and Projecting Crop Productivity using Integrated Crop and Economic Modeling Techniques” held on December 20-22, 2016 and got certificate of honor
- I have participated in International Workshop on Renewable Energy Technologies in Pakistan” held on December 16, 2014 to December 18, 2014 and got certificate of honor
- I have participated in International Conference in “Renewable Energy Technologies in Pakistan” from October 1, 2013 to October 3, 2013 and got certificate of honor
- I have participated 3 days AIT cascading workshop titled “Ensuring Training Effectiveness” Organized by Learning Innovation Division (HEC) and Department of Plant Pathology, University of Agriculture Faisalabad, from August 20-22, 2013
- I have participated in one day training program titled “Biosafety Training Workshop for Young Scientists” Organized by Department of Biochemistry University of Agriculture Faisalabad held on June 13, 2015
- Training Workshop on “Remote Sensing and Digital Image Processing for Precision Agriculture” on August 26-27, 2015.
- I have participated in one day international seminar on “Sustainable Use of Soil and Water Resources for Achieving Further Food Security: Challenges and Opportunities” Organized by Department of Irrigation and Drainage & Water Management and Research Centre, University of Agriculture Faisalabad, held on May 13, 2015
- I have participated in one day international short course on “Techniques for Proposal Writing and Presenting Scientific Papers” Organized by Department of Irrigation and Drainage & Water Management and Research Centre, University of Agriculture Faisalabad, held on May 15, 2015
- I have participated in one day seminar on “Human Factors Engineering in Projects” Organized by University of Engineering and Technology, Lahore, Faisalabad Campus under the Continuing Professional Development Program, held on April 30, 2015
- Attend a master class in “Enquiry- Based Learning at the University of Agriculture Faisalabad” international collaboration with the University of Manchester, UK. Held on March 1, 2014
- One day international conference on “Food Security-Way to Food Engineering” on March 16, 2012.
- One day international workshop on “Solar and Bio-Energy Systems” under the ICDD Project titled “Value addition to agricultural products using solar energy on Nov. 24, 2011.
- International Seminar on “GIS applications in Agriculture-Precision Agriculture” on July 9, 2011.
- International Seminar on “Role of Agricultural Engineers in Mechanized Agriculture” on March 19, 2011.
- International Seminar on “Research and Development in Agricultural Machinery: A 50 Year Review of Pakistan” on March 21, 2011.
- International Seminar on “Scope of Resource Conservation Technologies in Pakistan Agriculture” on March 24, 2011.
- International Seminar on “Role of Agricultural Machinery on Poverty Alleviation and Food Security in Pakistan” on March 26, 2011.
- National Conference on “Challenges and Options for Plant Health Management” on November 28-29, 2011

Technical Competencies:

- R Studio
- Microsoft Office (PowerPoint, Word, Excel)
- AutoCAD (2D&3D)
- Solid-Works
- 3Ds Max
- GIS software

Language Competencies:

- English
- Urdu
- Panjabi

Management Skills:

- Working as Assistant Superintendent from December, 2014 to date in Sir Syed Hall, University of Agriculture, Faisalabad
- I worked as Assistant Superintendent from September, 2013 to December, 2014 in Afzal Hall, University of Agriculture, Faisalabad
- I worked as Assistant Superintendent from October, 2012 to September, 2013 in Kisan Hall, University of Agriculture, Faisalabad
- Punctual and committed to work.
- Able to handle each challenging task.
- Having the ability to lead a team.

Salient Achievements:

- Member of organizing committee constituted by worthy Vice Chancellor (UAF), to conduct an event titled “2nd Phase of financial of Final Year Design Projects (2023-24)” in Iqbal auditorium held on December 13, 2023.
- Member of Organizing Committee of Project “Awareness Campaign Regarding Energy Saving Strategies in Faisalabad (2015)” under Social Integration Outreach program by HEC at UAF
- Member of Management Committee in 23rd Convocation of University of Agriculture Faisalabad held on March 16, 2016
- Member of Management Committee in 22nd Convocation of University of Agriculture Faisalabad held on March 26, 2015
- Member of organizing committee constituted by worthy Vice Chancellor (UAF), for installation of “Bag Type Biogas Plants” at University of Agriculture, Faisalabad.
- Member of organizing committee of international conference on “Renewable Energy Technologies in Pakistan” on October 1-3, 2013.
- Team Member of ALP Project titled “Design, development and modeling of a Scheffler fixed focus concentrator for the post-harvest processing of different agricultural products” submitted in year 2012.
- Member “Pakistan Society of Agricultural Engineering”