Dr. Asma Sattar

Department of Structures and Environmental Engineering, University of Agriculture, Faisalabad, Pakistan
0092-3326901192, asma2005_2182@yahoo.com

EDUCATION

Nanjing Agricultural University, Nanjing, China

- PhD Agricultural Bio-Environmental and Energy Engineering **9/2013- 6/2016**

University of Agriculture, Faisalabad, Pakistan

- M.Sc (Hons) Agricultural Engineering, 3.56/4.00, **08/2009-10/2011**
- B.Sc Agricultural Engineering, 3.46/4.00, Achieve merit scholarship throughout **09/2005-07/2009**

DISTINCTIONS

- Twice Excellent Student Award in 2015, 2016 by Nanjing Agricultural University, Nanjing China
- Won full CSC scholarship (2013)
- Achieved merit Scholarship throughout undergraduate degree program (2005-2009)

INTERNSHIP'S & SHORT COURSES

- One day Seminar on Mechanical Rice Transplanting and Practical Demonstration (1CPD) **07/2022**
- One day Seminar PEC-CPD training workshop on Waste to Energy Technologies (1CPD) **07/2022**
- AutoCAD: Advanced Level and Earning Opportunities **12/2019**
- Hydrological Modeling using SWAT, HEC-HMS and R **11/2019**
- Design and Practical Approach for Instrumentation and Measurement **10/2019**
- One Day Seminar on Water Efficiency & Wastewater Treatment in Textile Industry (1CPD) **02/2019**
- One Day Training workshop on OBE at UAF **09/2018**
- Workshop on OBE and SAR Development **03/2018**
- One Day seminar on World water Day: Why Waste Water? **03/2017**
- Int Workshop on Sustainable Energy Solutions, UAF & Uni. of Kassel- Germany (1 CPD) **11/2016**
- Precision Agricultural Technologies, UAF (2CPD) **10/2016**
- Training on Parameters of Environmental Impact Assessment, Faisalabad **06/2011**
- Training under NIP at EDO (CD) Faisalabad **03/2010-01/2011**
- Participated in Wheat Sowing Campaign 2008-2009 at AARI, Faisalabad **10/2008-11/2008**
- Trainee Engineer at Steam Power Station, Faisalabad **07/2008**
- Participated in 15 days Survey camp at Abbotabad, Bahreen, Islamabad **06/2006**

EMPLOYMENT HISTORY

University of Agriculture, Faisalabad, Pakistan – Assistant Professor **08/2016 –08/2017**
University of Agriculture, Faisalabad, Pakistan – Visiting Faculty **10/2017 –06/2024**
University of Agriculture, Faisalabad, Pakistan – Lecturer **09/2024 –to Date**

- *Courses in hand:* Surveying, Levelling, Fundamentals of Env. Engineering, Mechanics of Material, Engineering Materials, Industrial Pollution and Its control, Wastewater Engineering, Renewable Energy and Environment, Engineering Drawing

RESERCH ACTIVITIES

- Development and testing of Anaerobic bio reactor for bio-hydrogen production from rice straw (Completed)
- Batch production of bio-hydrogen from food waste (Completed)
- Agricultural tillage tools testing in soil bin in comparison with field (Completed)
- Development of groundwater quality map by using GIS of G.M. Abad (completed)

MODEL DEVELOPED

- Development of Anaerobic Bio Reactor (2016)
- Assisted in the development of different working models like Solar Assisted bio gas plant, Garden waste shredder (2011), Portable Bio gas plant (2009)

PUBLICATIONS (Impact Factor 28.29)

1. Photocatalytic Removal of Azo Dyes Using a CNT Doped ZnO/Fe2O3 Catalyst by Waheed Tariq, Ch. Arslan, Sohali Ali Naqvi, Muhammad Abdullah, Abdul Nasir, Syed Hamza Gillani, Abdul Ghafoor, **Asma Sattar**, Haroon Rashid, Muhammad Yamin. Pol. J. Environ. Stud. Vol. 31, No. 5 (2022), 1-11 **(IF. 1.699)**
2. Effect of temperature on biogas production potential of banana peels co digested with biogas slurry in anaerobic bioreactor by Atif Zahoor, Ch Arslan, **Asma Sattar**, Muhammad Asad Tahir, Zia Ur Rahman Farooqi, Muhammad Shoaib, Muhammad Saqlain, Muhammad Safdar, Noman Ahmad. Engineering Heritage Journal (GWK) 5(2) (2021)
3. Comparative study of hospital waste management practices at different health care units in district Faisalabad for the development of improvement strategies by Naila Azeem, Ch. Arslan, Dr. Haroon Rashid, **Asma Sattar**. Earth Science Pakistan. 2018. 2(16-21)
4. Study of spatial and temporal variability of arsenic in groundwater due to drain by using GIS**.**Ch. Arslan**, Asma Sattar**, Do Minh Cuong, Faizan ul Haq Khan, Abdul Nasir, Zia Bakhat, Fariha Ilyas. Earth Science Pakistan. 2018. 2(22-24)

5. Wastewater Characterization of Paharrang Drain in Faisalabad and Evaluation of Subsurface Contamination Using Geographical Information System. Dr. Haroon Rashid, Engr. Atif Bilal Asad, Dr. Abdul Nasir, Dr. Arslan Chaudhary, **Dr. Asma Sattar**. Pakistan Journal of Geology. 2018. 2 (11-17)
6. Indigenous vesicular mycorrhizal fungi effect on maize under Different textures.by Fariha Ilyas, M. Arif, Aysha Iftikhar, **Asma Sattar**, Do Minh Cuong, Mehwish Ilyas, Amna Parveen. Earth Sciences Pakistan (ESP) 2(2) (2018) 12-15
7. Efficient and Eco-friendly Management of biodegradable Municipal Solid Waste (MSW) using naturally aerated Windrow Composting Technique in District Lahore Pakistan. Naveed Ahmad, Tanveer Hussain, Abdul Nasir Awan**,** **Asma Sattar**, Chaudhary Arslan**,** Muhammad Qamar Tusief, Zillay Mariam. Earth Science Pakistan. 2017, 1(1-4)
8. Comparing the effect of total solids concentration on bio-hydrogen production potential of food waste and its derivatives under mesophilic thermophilic conditions. Chaudhry Arslan, **Asma Sattar**, Ji Changying, Abdul Nasir, Irshad Ali Mari, Fang Huimin, Huang Yu Ping. Pak. J. Agri. Sci, Vol 53(3). **(IF 0.856)**
9. Quantification of temperature effect on batch production of bio-hydrogen from rice crop wastes in an anaerobic bio reactor. **Asma Sattar**, Chaudhry Arslan, Changying Ji, Saba Sattar, Muhammad Umair, Sumiyya Sattar, Muhammad Zia Bakht, International Journal of Hydrogen Energy. http://dx.doi.org/10.1016/j.ijhydene.2016.04.087. **(IF 7.139)**
10. Comparing the Bio-Hydrogen Production Potential of Pretreated Rice Straw Co-Digested with Seeded Sludge Using an Anaerobic Bioreactor under Mesophilic Thermophilic Conditions. **Asma Sattar**, Chaudhry Arslan, Changying Ji, Sumiyya Sattar, Irshad Ali Mari, Haroon Rashid, Fariha Ilyas. Energies, **2016**, 9, 198 **(IF 3.252)**
11. Optimizing the physical parameters for bio-hydrogen production from food waste co-digested with mixed consortia of Clostridium By **Asma Sattar**, Chaudhry Arslan, Ji Changying, Chen Kunjie, Abdul Nasir, Fang Huimin, Muhammad Umair, J. Renewable Sustainable Energy , **8**, 013107 (2016) **(IF 2.847)**
12. Effect of straw length and rotavator kinematic parameter on soil and straw movement by a rotary blade by Huimin Fang, Qingyi Zhang, Farman Ali Chandio, Jun Guo, **Asma Sattar**, Chaudhry Arslan, Changying Ji, Engineering in Food, Environment and Food, doi:10.1016/j.eaef.2016.01.001
13. Optimizing the impact of temperature on bio-hydrogen production from food waste and its derivatives under no pH control using statistical modelling by C. Arslan, **A. Sattar**, C. Ji, S. Sattar, K. Yousaf, and S. Hashim, Biogeosciences, *12, 6503–6514, 2015.* **(IF 5.092)**
14. Effect of temperature and total solids concentration on hydrogen production from rice waste by A. Chaudhry, **A. Sattar**, Ji Changying, F. A. Chandio and A. Nasir, Pak. J. Agri., Agril. Engg., Vet. Sci., *2015, 31 (2): 289-297 (HEC recognized)*
15. Impact of pH Management Interval on Biohydrogen Production from Organic Fraction of Municipal Solid Wastes by Mesophilic Thermophilic Anaerobic Codigestion by Chaudhry Arslan, **Asma Sattar**, Ji Changying, Abdul Nasir Irshad AliMari, and Muhammad ZiaBakht, BioMed Res Int Volume 2015. **(IF 3.441)**
16. Analyses of 3-dimensional draught and soil deformation forces caused by mouldboard plough in clay loam soil by Mari, Irshad Ali,Ji, Changying, Naimtullah Leghari, Buriro, Ghulam Ali, Chandio, Farman Ali, ChuadryArslan , **Asma Sattar**, and Fang Huimin, Global Advanced Research Journal of Agricultural Science (ISSN: 2315-5094) Vol. 4(6) pp. 259-269, June, 2015.
17. Spatial distribution of soil forces on moldboard plough and draft requirement operated in silty-clay paddy field soil by Irshad Ali Mari, Changying Ji, Farman Ali Chandio, Chuadry Arslan, **Asma Sattar**, Fiaz Ahmad, Journal of Terramechanics *60 (2015) 1–9* **(IF 2.284)**
18. Performance and evaluation of disc tillage tool forces acting on straw incorporation soil by Irshad Ali Mari, Farman Ali Chandio, Ji Changying, Chaudhry Arslan, **Asma sattar**, Ahmed Ali Tagar and Fang Huimin, *Pak. J. Agri. Sci., Vol. 51(4), 855-860; 2014***(IF 0.856)**
19. Physical Analysis of Groundwater of G.M. Faisalabad by using GIS by Abdul Nasir, Ch. Arslan, **Asma Sattar** and Muhammad Azam Khan, Pak. J. Agri. Sci., Vol. 49(4), 541-547; 2012. **(IF 0.856)**

CONFERENCES

1. Conversion of yard waste into pallets for energy production by Chaudhry Arslan, Usman Zafar, **Asma Sattar**, Abdul Nasir, Irshad Ali Mari, M. Umair, International Conference on Green Energy Technologies: Opportunities and Challenges (GET) October 29-30, 2019. Organized by University of Agriculture, Faisalabad (UAF), International Center for Development and Decent Work (ICDD) and Higher Education Commission, Pakistan (HEC), PP 120 ISBN 978-969-9035-18-0
2. Co-digestion of kitchen waste with biogas slurry for biogas production Chaudhry Arslan, **Asma Sattar**, M. Saad Sohail, Naima Nawaz, Ijaz Ashraf. International Conference on Green Energy Technologies: Opportunities and Challenges (GET) October 29-30, 2019. Organized by University of Agriculture, Faisalabad (UAF), International Center for Development and Decent Work (ICDD) and Higher Education Commission, Pakistan (HEC), PP 121 ISBN 978-969-9035-18-0
3. Enhance volume reduction of food waste in a landfill through leachate recycling by Chaudhry Arslan, M.Umair, **Asma Sattar,** Haroon Rashid, Farman Ali Chandio, Umair Ashraf. International Conference on Green Energy Technologies: Opportunities and Challenges (GET) October 29-30, 2019. Organized by University of Agriculture, Faisalabad (UAF), International Center for Development and Decent Work (ICDD) and Higher Education Commission, Pakistan (HEC), PP 122 ISBN 978-969-9035-18-0
4. Bio-hydrogen production by anaerobic digestion of food waste by Chaudhry Arslan, **Asma Sattar,** Naima Nawaz, Ijaz Ashraf, Ji Changying. International Conference on Green Energy Technologies: Opportunities and Challenges

(GET) October 29-30, 2019. Organized by University of Agriculture, Faisalabad (UAF), International Center for Development and Decent Work (ICDD) and Higher Education Commission, Pakistan (HEC), PP 136 ISBN 978-969-9035-18-0

5. Bio-hydrogen production from food waste under interval heating. **Asma Sattar,** Sumiyya Sattar, Chaudhry Arslan, Ji Changying, Fariha Ilyas. International Conference of the Cotton- Textile value Chain: Environmental Repercussions from field to hanger Jan 29-30, 2019 Organized by University of Agriculture, Faisalabad and BMBF-InoCotton GROW Project Partners., PP 44 ISBN 978-969-9035-15-9
6. Impact of Pretreatment on Lignocellulosic Properties of Rice Straw, **Asma Sattar**, Chaudhry Arslan, Ji Changying, Haroon Rashid, Irshad Ali Mari. International Conference of the Cotton- Textile value Chain: Environmental Repercussions from field to hanger Jan 29-30, 2019 Organized by University of Agriculture, Faisalabad and BMBF-InoCotton GROW Project Partners. PP 45 ISBN 978-969-9035-15-9
7. Development of briquette from bagasse for energy production. Chaudhry Arslan, **Asma Sattar,** Abdul Nasir, Faisal Hayat, Fariha Ilyas. International Conference of the Cotton- Textile value Chain: Environmental Repercussions from field to hanger Jan 29-30, 2019 Organized by University of Agriculture, Faisalabad and BMBF-InoCotton GROW Project Partners. PP 46 ISBN 978-969-9035-15-9
8. Proximate analysis of briquette developed from garden waste produced in UAF. Chaudhry Arslan, **Asma Sattar,** Zia Bakhat, M. Umair Ashraf, Farman Chandio. International Conference of the Cotton- Textile value Chain: Environmental Repercussions from field to hanger Jan 29-30, 2019 Organized by University of Agriculture, Faisalabad and BMBF-InoCotton GROW Project Partners. PP 47 ISBN 978-969-9035-15-9
9. Study of the impact of incubation temperature on bio-hydrogen production from rice straw co-digested with sludge by **Asma Sattar,** Chaudhry Arslan, Ji Changying, Abdul Nasir, Muhammad Umair, Sumiyya Sattar. International Conference "Asia Pacific Policy Dialogue on water, energy and food security for poverty alleviation in dryland regions Nov. 23-25" organized by "UNESCO and PMAS Arid University, Rawlapindi, Pakistan" at Rawalpind, Pakistan. (Received Shield of honour)
10. Impact of solid state NaOH treatment on mesophilic bio-hydrogen production from rice straw by **Asma Sattar**, Chaudhry Arslan, Ji Changying, Abdul Nasir. International Worksop on sustainable Energy Solutions for community Development in Pakistan 8-9 November, 2016 organized by University of Agriculture, Faisalabad, Pakistan and University of Kassel, Germany
11. Bio-hydrogen production from food waste and its derivatives under mesophilic-thermophilic interval heating Chaudhry Arslan, **Asma Sattar,** Ji Changying, Abdul Nasir and Haroon Rashid. International Worksop on sustainable Energy Solutions for community Development in Pakistan 8-9 November, 2016 organized by University of Agriculture, Faisalabad, Pakistan and University of Kassel, Germany.
12. Impact of pH management on bio-hydrogen production from food waste and its derivatives. Chaudhry Arslan, **Asma Sattar,** Ji Changying. 2015 International Environmental Engineer Conference, creative technology for engineers Oct 28-30, 2015. Busan, Korea.
13. Effect of temperature on bio-hydrogen production from waste rice. Chaudhry Arslan, **Asma Sattar,** Ji Changying, F. Chandio, I.M. Mari and A.N Awan. 2nd International Conference on agriculture, food and animal sciences 25-26 Feb 2015. Sindh Agricultural University, Tandojam. Pakistan

PROFESSIONAL ASSOCIATION

- Member of Pakistan Engineering council, Pakistan (AGRI/ 2927)

SYSTEMS EXPERIENCE

Matlab (Curve fitting and surface plotting), MS Windows, MS Excel, Word and PowerPoint, GIS (Selected option), Auto CAD (2-D), E-mail & Internet

EQUIPMENT HAND ON

Equipment related water, wastewater quality assessment, Equipment used for force analysis especially for tillage tools

OTHER SKILLS AND INTERESTS

Language skills: Fluent in English (EPC), Urdu and Panjabi, Chinese (Spoken Basic level)
Tests Taken: **NTS-GAT** General Score: 63, **GAT Subject** (UAF admission for PhD, 2011) Qualified
Interests: Reading, Cooking especially Chinese