

# RENTECH

Symposium on Renewable Energy Technology

12 September 2014, Kathmandu, Nepal

## Compendium

Volume 4, September 2014

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**RenewableNepal: A Programme for Research Based Industrial Development in Nepal**

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## ABOUT THE SYMPOSIUM

The purpose of RENTECH symposium is to facilitate free interchange of ideas and experiences among the participants on renewable energy technologies being or been researched, developed, or deployed in Nepal. It may also include topics that might be vital for technology transfer from abroad. Rentech is an annual symposium and this is third in the series. The symposium schedule is as follows.

**Registration: 09:00—09:30**

**Opening: 09:30—09:40**

**Oral Presentation Technical Session I: 09:40—12:40**

1. *"Research and Development Initiatives on Renewable Energy Technologies in Nepal: An Overview,"* **Rakesh Y. Shrestha**, Assistant Programme Manager, RenewableNepal Programme, Kathmandu University
2. *"Performance Characteristics of Semi-Dry Anaerobic Digestion of Cow Dung and Excess Sludge Mixture under Psychrophilic Condition,"* **Ajay Kumar Jha**, Assistant Professor, Institute of Engineering, Pulchowk, Tribhuvan University
3. *"Further R&D, optimization and prototype development of Jatropha based sustainable cooking technology for rural Nepal by enabling environment for technology dissemination and commercial development,"* **Grishma Manandhar**, Project Officer, People, Energy and Environment Development Association (PEEDA)
4. *"Monitoring the production of a Biogas Plant – a Statistical Analysis,"* **Jyoti U. Devkota**, Professor/Head of Department of Natural Sciences, Kathmandu University
5. *"Sustainable Lignocellulosic Feedstock Biorefinery and Lignin Utilization: A Review,"* **Madhav Pandey**, Assistant Professor, DoEE, SoE, Kathmandu University
6. *"Pine needle briquette as a promising fuel for gasifier,"* **Manisha Dahal**, Student, Mechanical Engineering, Kathmandu University
7. *"Biodiesel from Microalgae: An Overview on Optimization of Different Parameters for Algal Productivity,"* **Nirpesh Dhakal**, Student/Research Assistant, Department of Biotechnology, Kathmandu University
8. *"Prospects of Bagasse Cogeneration in Sugar Industries of Nepal,"* **Sajjan Pokhrel**, Assistant Lecturer, Mechanical Engineering, Kantipur City College
9. *"Optimization of External Potential for Ethanol Production by yeasts in electrochemical Cell,"* **Jarina Joshi**, Lecturer, Central Department of Biotechnology, Tribhuvan University, Nepal

**Oral Presentation Technical Session II: 13:40—16:40**

1. *"Benefits and opportunity of new technology of lighting with reference to case study of Kathmandu University, Dhulikhel,"* **Bharat Thapa**, Researcher, Lighting Laboratory, DoEE, SoE, Kathmandu University
2. *"Battery-Ultracapacitor based Hybrid Energy System for Standalone power supply and Hybrid Electric Vehicles - Part I: Simulation and Economic Analysis,"* **Netra P Gyawali**, Nepal Power Engineering Society (NPES)
3. *"Design and Analysis of a Small Scale Wind Turbine Rotor at Arbitrary Conditions,"* **Bhaskar U. Aryal**, Student, Mechanical Engineering, Kathmandu University
4. *"Design of Annular Flow Turbine for Low Head Pico-Hydro Application,"* **Kishor Maharjan**, Student, Electronics and Communication Engineering, Kantipur Engineering College
5. *"Standardization and Development of Civil Design Framework for Small Hydropower Project in Nepal,"* **Pawan Khatri**, Student/Research Assistant, Civil Engineering, Kathmandu University
6. *"The downward trend in cost of solar PV : An opportunity to synergy of Hydro and Solar Power for Sustainable Renewable Energy in Nepal,"* **Rabindra Kumar Suwal**, Portfolio Manager, Poverty Alleviation Fund (PAF)
7. *"Design and Development of a Reversible Pump Turbine Test Rig,"* **Ravi Koirala**, Student/Researcher, Turbine Testing Lab (TTL), Kathmandu University
8. *"Spanwise re-stacking techniques in turbo-machinery blades and application in Francis runner,"* **Sailesh Chitrakar**, Project Coordinator, Turbine Testing Lab (TTL), Kathmandu University
9. *"Computational Fluid Dynamics (CFD) analysis of Pelton runner of Khimti Hydro-power Project of Nepal,"* **Sanam Pudasaini**, Student/Researcher, Turbine Testing Lab (TTL), Kathmandu University

**Closing Session: 16:40—17:00**

*Color versions of the papers published in this compendium may be found at the website of RenewableNepal Programme, <http://www.ku.edu.np/renewablenepal/index.php/publications.html>*

## About KU, SINTEF, and NORAD



Kathmandu University (KU) is an autonomous, not-for-profit, non - government institution dedicated to maintain high standards of academic excellence. It is committed to develop leaders in professional areas through quality education. The vision of KU is “To become a world-class university devoted to bringing knowledge and technology to the service of mankind”. Its mission is “To provide quality education for leadership”



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## **RenewableNepal**

**A Programme for Research Based Industrial Development in Nepal**

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