



# Turbine Testing Lab

Monthly Bulletin October, 2016

## KETEP 2015- 2017 Project

- Coating on the cross- flow runner blades with **TiO<sub>2</sub>** (Titanium Oxide) and **WC** (Tungsten Carbide) and **experiments** conducted on RDA.
- **Phase III** (Final) phase of the project commenced from October 2016 which includes the **installation of 20 kW cross- flow turbine** at Majhifeda VDC, Kavrepalanchok and performance analysis of the same.

## Energize Nepal Project

- Studying project documents and formulating **work-plan**.
- **Vacancy announcement** for various project management positions.

## Lab activities

- Dr. Biraj Singh Thapa completed his **doctoral thesis** on "**Effects of sediment erosion in guide vanes of Francis turbines**" from NTNU, Trondheim, Norway and rejoined the Department of Mechanical Engineering.
- Mr. Sailesh Chitrakar rejoined the lab from 23<sup>rd</sup> October, 2016 after completion of his exchange program from NTNU as a part of his Ph.D studies entitled "**Sediment erosion and secondary flow in Francis turbine**".

## Academic activities of Masters Student

- Installation of **3 Guide Vanes Cascade Rig** at TTL for final project activity.

## Publications

- Ravi Koirala, Sailesh Chitrakar, Hari Prasad Neopane, Balendra Chhetri, Bhola Thapa, "Computational Design of Bifurcation: A Case of Darundi Khola Hydropower Project, Nepal", **International Journal of Fluid Machinery and Systems**, 2016 (*Accepted for publication*)

## Talk Program

- Hosting of presentation of Dr. Ram Chandra Adhikari, Ph.D graduate from **University of Calgary**, Canada on the topic "**Design & optimization of Cross- flow turbines**" on Oct 20; which was based upon his doctoral research works

## Internship Program

- Completion of **45 days long internship** of Applied Physics department student.