*The Department of Mechanical Engineering presents:*

## *The Master's Dissertation Defense of*

# Abdullah Shukri

## Tuesday, May 31, 2016, 2:30PM
## Bourns Hall A265

### Pressure Loss of Turbulent Power law Fluid Flow  between Two Parallel Rough Plates

Master of Science, Graduate Program in Mechanical Engineering
University of California, Riverside, May 2016
Dr. Guanshui Xu, Chairperson

The pressure loss of turbulent power law fluid flow between parallel plates has been theoretically analyzed. Using Prandtl mixing length theory and Van Karman similarity hypotheses for turbulent flow, we have derived a new friction factor formula that resembles previous formula for turbulent power law fluid flow in rough pipes. The new formula is also valid for the transition region between smooth and wholly rough wall turbulence.