

## BACKGROUND OF INVESTIGATOR

### Beni Cukurel - Curriculum Vitae

**Name:** Beni Cukurel

**Address:** Faculty of Aerospace Engineering, Technion-IIT, Technion City, Haifa 32000, Israel.

**Email:** beni@cukurel.org

#### **Academic Training**

- Ph.D. (05/05/2012) Purdue University, School of Mechanical Engineering GPA:4.00  
Thesis: “Conjugate Heat Transfer Investigation of a Fixed Rib-Roughened Cooling Passage”
- M.S.M.E (03/05/2008) Purdue University, School of Mechanical Engineering GPA:4.00  
Thesis: “Particle Image Velocimetry Investigation of a High Speed Centrifugal Compressor”
- B.S.M.E (17/12/2005) Purdue University, School of Mechanical Engineering GPA:3.68  
Thesis: “A Study on Highly Potential Forcing Functions Triggering Dynamic Stall”  
Minor in Economics Purdue University, School of Management GPA:4.00

#### **Academic Appointments**

- Lecturer (2012-current), Technion-Israel Institute of Technology, Dept. of Aerospace Engineering.

#### **Work Experience**

- VKI Doctoral Researcher (2008–2012, during Doctoral Programme), Von Karman Institute for Fluid Dynamics, Belgium.
- Zucrow Laboratories Research Engineer (2005–2008, during M.S.M.E/Doctoral Programme), Ramp, Purdue University, Indiana, USA.
- Zucrow Laboratories Research Engineer (2004–2005, during B.S.M.E Programme), Ramp Purdue University, Indiana, USA.
- Co-op Engineer (2002-2003), Robert Bosch Corporation, Albion, Indiana

#### **Honours And Awards**

- Elected to European Turbomachinery Society Committee organizing European Turbomachinery Conference ( since 2014)
- Elected to International Gas Turbine Institute Heat Transfer Committee (since 2013)
- Elected to ASME Heat Transfer K-14 Gas Turbine Committee (since 2013)
- Top 10 Most Downloaded Articles in Journal Of Turbomachinery 03/2010
- Purdue University Ross Fellowship 2007-2008
- AIAA Region III Student Conference Winner 01/2007

### **Research Grants**

- Aerodynamic/Thermal Performance Assessment of Small Jet Engine Turbines including Cooling Technologies, (Role:PI), MAFAT – Jet Engine Division, Israeli Ministry of Defense, 2014 (250,000 NIS).
- Minerva Center for Micro Turbine Systems Towards Distributed Power Generation, (Role:Co-PI) Minerva Research Center, Max Planck Society, 2014-2020 (900,000 €).
- Gas Temperature and Surface Heat Transfer Measurements in High Enthalpy Environments using Two Color Thermometry, (Role:PI) New Scientist Research Grant, Israeli Ministry of Defense, 2013-2016 (600,000 NIS).
- Establishment of Turbomachinery and Heat Transfer Laboratory, (Role:PI) Start-up Package (Seed Funds), Technion- Israel Institute of Technology, 2012 (2,700,000 NIS).

### **Participated Projects**

- Hotwire Anemometry Measurements in OPAL build GT fan, Rolls-Royce Deutschland Von Karman Institute for Fluid Dynamics, Belgium, 2010-2011.
- Experimental and Numerical Investigation of Conjugate Heat Transfer , AFOSR Grant Von Karman Institute for Fluid Dynamics, Belgium, 2008-2011.
- Characterization of the Unsteady Flow Fields in a Transonic Diffuser, Rolls-Royce USA Purdue University, IN, USA, 2004-2007.

### **Supervision and Advisory Activities:**

Thesis Advisor to (6 M.Sc. and 2 B.Sc. Students), and currently supervisor to 3 M.Sc. Students

### **Technical Experience/Interests**

- Basic and Applied Heat Transfer: Thermo-Acoustic Interaction, Conjugate Heat Transfer, Jet Impingement, Thermal Barrier Coatings.
- Measurement Technique Development: Infrared Thermography, Liquid Crystal Thermometry, Particle Image Velocimetry, Hotwire Anemometry, Laser Induced Fluorescence.
- Gas Turbine Component Analysis: Turbine Cooling and External Flows, Aero-Thermal Design of Gas Turbine Hot Gas Section, Axial and Radial Compressor/Turbine Aerodynamics.