



Dr.-Ing. Naseem Uddin is a Professor in the Department of Mechanical Engineering at NED University of Engineering & Technology, Karachi. He did his under-graduate studies at the very institute.

In 2002, he obtained the Master of Engineering degree with specialisation in field of *Energy Systems*. In 2004, he was selected by the Higher Education Commission (HEC), Pakistan and Deutscher Akademischer Austausch Dienst (DAAD), Germany for the PhD Fellowship program.

In 2008 he obtained the Doktor-Ingenieur (Dr.-Ing.) (*Doctor-Engineer*) degree from the Institute of Aerospace Thermodynamics, Universität Stuttgart. In the doctoral studies he was mainly involved in the simulation and modeling of complex turbulent flows. Dr.-Ing. Naseem Uddin has done LES computations of complex turbulent flows (impinging jet flows, flow over periodic ribs, flow over a backward-facing step, flow through square duct) also in collaboration with the WKS project funded by German Agency Deutsche Forschungsgemeinschaft (DFG).

The work conducted is now available in a book titled ***Turbulence Modeling of Complex Flows in CFD***, published by Dr-Hut Verlag, Germany.

### **Education**

- 2008 Doktor-Ingenieur (Dr.-Ing.) (*Doctor Engineer*) with distinction “Sehr Gut” (excellent)  
Institute of Aerospace Thermodynamics (ITLR),  
Universität Stuttgart, Stuttgart, Germany
- 2002 Master of Mechanical Engineering (GPA 3.91 out of 4.0)  
NED University of Engineering & Technology, Karachi
- 1996 Bachelor of Mechanical Engineering (76 %)  
NED University of Engineering & Technology, Karachi

### **Experience**

- 2010 –date Professor, Mechanical Engineering Department,  
NED University of Engineering & Technology, Karachi, Pakistan
- 2008 – 2010 Associate Professor, Mechanical Engineering Department, NEDUET.
- 2004 - 2008 Research Fellow, Institute of Aerospace Thermodynamics,  
Universität Stuttgart, Stuttgart, Germany
- 2002 - 2008 Assistant professor in Mechanical Engineering Department, NEDUET
- 1999 – 2002 Lecturer in Mechanical Engineering Department, NEDUET
- 1997 – 1999 Lab Teacher in Mechanical Engineering Department, NEDUET

### **Professional Memberships**

- Pakistan Engineering Council (PEC)

- American Society of Mechanical Engineers (ASME)

**Invited Speaker at**

6<sup>th</sup> INTERNATIONAL BHURBAN CONFERENCE ON APPLIED SCIENCES AND TECHNOLOGY,  
January 19 – 22, 2009

Topic: Large Eddy Simulation (LES) of Impinging Jet

**Honors**

HEC/DAAD Fellowship 2004 – 2008

**Research interest**

- Renewable Energy
- Analysis of Energy Systems
- Impingement Cooling
- Turbulent Flow Control
- CFD & High Performance Computing
- Direct and Large Eddy Simulations
- Turbulence Modeling of Complex flows

**Language Proficiency**

- German (learned at *Goethe* , *Berlitz*, Karachi also at *InterDaF*, Leipzig, Germany)
- English
- Urdu

**Research Project**

Currently, I am involved in a HEC-funded research project related to heat transfer by multiple jets impingement. The project is running under the technical collaboration of University of Stuttgart, Germany. The project has started in May 2009 and will be completed within 3 years hopefully. A dedicated laboratory is founded for this project.

Novell has published the news of the laboratory at its website:

[http://www.novell.com/success/ned\\_university.html](http://www.novell.com/success/ned_university.html)

**Research Publications**

**Book & Book Articles**

1. Naseem Uddin, Turbulence Modeling of Complex Flows in CFD, Verlag Dr. Hut (Publisher in Germany), 2008. (book ISBN 978-3-89963-792-2)
2. Naseem Uddin, Sven Olaf Neumann, Peter Lammers, Bernhard Weigand , Thermal & flow field analysis of turbulent swirling jet impingement using Large Eddy Simulation, High Performance Computing in Science & Engineering 08, Springer Verlag. (Article) (ISBN 9783540883012), 2008
3. Naseem Uddin, S.O. Neumann, B. Weigand, Understanding the dynamics and control of aturbulent impinging jet via pulsation and swirlusing Large Eddy Simulation, High Performance Computing in Science & Engineering 09, Springer Verlag, 2009

**Selected Research Publications**

1. Naseem Uddin, Sven Olaf Neumann, Bernhard Weigand, Large Eddy Simulation of the heat transfer due to swirling & non-swirling jet impingement, Proceedings of ASME Summer Heat Transfer Conference, HT2008-56422, August 10-14, 2008, Jacksonville, Florida USA.
2. Naseem Uddin, Sven Olaf Neumann, Bernhard Weigand, The effect of inlet velocity field excitation of turbulent impinging jet heat transfer, Int. Conf. on Jets, Wakes and Separated Flows September 16 -19, 2008, Technical University of Berlin, Berlin, Germany.

3. N. Uddin, S. O. Neumann, B. A. Younis, and B. Weigand. Strömungs- und passive skalarfluss-vorgänge in komplexen turbulenten prallströmungen. Number 1029. ProcessNet-Fachausschuss Wärme- und Stoffübertragung, VDI-GVC, 2008.
4. N. Uddin, S. O. Neumann, B. Weigand, Nature of turbulence in Complex separated flows investigated through anisotropy invariant mapping, 6<sup>th</sup> International Bhurban Conference on applied sciences & Technology (IBCAST), Islamabad, January 2009
5. Naseem Uddin, Sven Olaf Neumann, Bernhard Weigand, Bassam A. Younis, Large-Eddy Simulations and heat-flux modeling in a turbulent impinging jet, Journal of Numerical Heat Transfer –A Part A, 55: 906–930, 2009
6. Naseem Uddin, S.O. Neumann, B. Weigand, Effect of jet's inlet temperature field excitation on heat transfer by turbulent impinging jet: An investigation based on Large Eddy Simulations, Turbulence Heat & Mass Transfer Conference, Rome, Italy, September 2009