

The Institute of Electromagnetic Theory at TUHH is pleased to have as international academic guest on May 5, 2017:

Prof. Dr. Farhad Rachidi

**École polytechnique fédérale de Lausanne
(EPFL), Switzerland**



Students, faculty, and professionals from academia and industry interested in the lightning phenomenon, its electromagnetic effects, and the challenges of modern lightning research are cordially invited to attend his talk on:

Everything you don't know about lightning... and nobody else does either

**Room 0053/4 (WiKom), Building I (DE22)
Hamburg University of Technology (TUHH)
Schwarzenbergstraße 95, 21073 Hamburg**

10:30 – 11:30, May 5, 2017

Farhad Rachidi is a well-known expert in lightning research and protection. He has authored and co-authored numerous publications in this area and is currently serving as a Distinguished Lecturer for the IEEE EMC Society.

Information on how to get to TUHH:

<http://www.tuhh.de/tuhh/uni/lageplan.html>

Abstract of the Talk:

In 1752, Benjamin Franklin opened a new field of research by making his famous kite experience and demonstrating the electrical nature of lightning. More than two hundred and fifty years later, despite abundant studies and considerable progress, lightning remains enigmatic and not fully understood.

Lightning played an essential role in the emergence of life on earth by contributing to the emergence of the first amino acids. It maintains the electrical balance of our atmosphere by recharging the ionospheric layer that protects us from solar and cosmic rays. Lightning causes more victims than floods and much more than tornadoes and hurricanes. It is also a phenomenal source of electromagnetic disturbances with a frequency spectrum that extends from very low frequencies to radio waves and even beyond. Between 30% -60% of power outages are due to lightning, with sometimes estimated costs of more than \$ 1 billion a year. It has recently been discovered that lightning strikes also produce enormous amounts of X-rays and gamma rays.

Farhad Rachidi will present in this lecture an overview of the lightning phenomenon, its electromagnetic effects, and the challenges of modern research in this field.

Biography of the Speaker:

Farhad Rachidi received the M.S. degree in electrical engineering and the Ph.D. degree from the Swiss Federal Institute of Technology, Lausanne, Switzerland, in 1986 and 1991, respectively. He was with the Power Systems Laboratory, Swiss Federal Institute of Technology, until 1996. In 1997, he joined the Lightning Research Laboratory, University of Toronto, Toronto, ON, Canada. From 1998 to 1999, he was with Montena EMC, Rossens, Switzerland. He is currently a Titular Professor and the Head of the EMC Laboratory with the Swiss Federal Institute of Technology, Lausanne, Switzerland. He has authored or co-authored over 160 scientific papers published in peer-reviewed journals and over 350 papers presented at international conferences.

Dr. Rachidi is currently a member of the Advisory Board of the IEEE TRANSACTIONS ON ELECTROMAGNETIC COMPATIBILITY and the President of the Swiss National Committee of the International Union of Radio Science. He has received numerous awards in the field of EMC and lightning protection. In 2014, he was conferred the title of Honorary Professor of the Xi'an Jiaotong University in China. He served as the Vice-Chair of the European COST Action on the Physics of Lightning Flash and its Effects from 2005 to 2009, the Chairman of the 2008 European Electromagnetics International Symposium, the President of the International Conference on Lightning Protection from 2008 to 2014, and the Editor-in-Chief of the IEEE TRANSACTIONS ON ELECTROMAGNETIC COMPATIBILITY from 2013 to 2015.

Contact Information:

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