

WREN Pioneers – 2010

It has been our proud tradition over the last twenty years for WREC/WREN to honour some the most outstanding scientists, engineers, innovators and industrialists who through their publications, discoveries and innovations have made an outstanding contribution to the progress and acceptance of renewable energy technologies. This year is no exception and we are pleased to bestow the title of WREN Pioneer on:

H E Dr Hilal Al-Hinai



H.E. Dr. Al-Hinai is the Secretary General of the recently established Research Council in Oman. He was the Director of the Water Research Center and an Associate Professor in the Department of Mechanical and Industrial Engineering at Sultan Qaboos University. He obtained his B.Eng. in Manufacturing Systems Engineering from Bradford University in 1986 and joined Sultan Qaboos University as a Maintenance Engineer. He obtained his M.Sc. (1988) and Ph.D. (1992) from the Applied Energy Department at Cranfield Institute of Technology in the UK. Beside his teaching duty,

he was appointed as an Academic Assistant for Innovation and Industrial Links at SQU.

Dr. Al-Hinai's research interests are in Solar Energy and Water Desalination with emphasis on solar water desalination and on Solar Cooling Techniques for Buildings in Hot Climates.

Professor David Elliott



Prof. David Elliott BSc, Ph.D has been active in the renewable energy field in the UK and EU since the 1970s, when he set up Renew, which is still one of the leading journals in the area. www.natta-renew.org. He worked for many years at the Open University where he pioneered courses and research on renewable energy policy and he has published extensively on that topic including 12 books, more than 40 reports and over 50 academic journal papers. He was an early supporter of WREC and has contributed regularly to WREC events and activities around the world. He is currently Emeritus Professor of Technology Policy at the Open University and

teaches courses on energy policy at a number of UK Universities including Bath, Cranfield, Kingston, Loughborough, Southampton, Warwick and UEC Falmouth.

Mr. Henk de Beijer



Henk de Beijer has been trained in the field of Mechanical/Construction Engineering, subsequent to which his focus was on thermodynamics, innovation and industrial marketing. He has worked extensively in the field of Renewable Energy. For the last twenty-six years he has been the Director of his company, De Beijer RTB BV (Strategy, Development and Renewable Energy systems) and MKB Winstpunt (Management and Innovation Consultancy for Small and Medium Enterprises). More recently, he has been Director of Inalfa-Ares Energy Systems BV, focusing on Renewable Energy products, SWEAT (Salt Water Energy Accumulation and Transformation), which is a joint venture with ECN/NUON, and Franklin Business Centre BV.

Mr. de Beijer is a member of the Dutch Engineer Association (KIVI/NIRIA), Verein Deutschen Ingenieure (VDI), European Heat Pump Association (EHPA) and the International Solar Energy Society (ISES), and an avid participant of the World Renewable Energy Congress. Over the last twenty-five years De Beijer Raadgevend Technisch Bureau BV has been involved in the Netherlands & International Energy Agency (IEA) and European Union (EU) Energy research programs. Studies were conducted in the future development of the field of district heating and cooling, heat pumps, energy storage and solar energy. Product development and testing is one of the main areas of focus of De Beijer RTB, which works closely with Universities, TNO, ECN and industrial companies. Some of the awards received include Ministry of Economic Affairs Industrial Award for the production and development of environmentally friendly products (heat pumps and solar systems) in 1995, Winner of the competition “Best Heat Pump System” from the Dutch Heat Pump Association in 1997, Dutch Building Association award for the Eco-Nok Ridge Solar system in 2003 and Economic Affairs Southern Netherlands winner of the Industrial Design and Engineering for Heat Pumps and District Heating Systems in 2004. The more recent innovations are the Solid Absorption Heating and Cooling system SWEAT BV and the Solabcool (cooling with heat) JAGA (B).

Professor Philip C Eames



Philip C. Eames is Professor of Renewable Energy and Director of the Centre for Renewable Energy Systems Technology at the University of Loughborough, UK. He was previously Director of the Warwick Institute for Sustainable Energy and Resources (WISER) where he held the Chair of Energy Efficiency and Conservation in the School of Engineering at the University of Warwick, UK. Before this he was Professor of Solar Energy Applications, directed the Centre for Sustainable Technologies and was Director of the Built Environment Research Institute within the School of the Built Environment at the University of Ulster. He has led research that has secured major advances in the dynamic simulation of the thermophysics of a broad range of building façade components (particularly very-low heat loss glazing and building integrated photovoltaics), thermal energy storage systems and concentrating solar energy collectors. He has also developed new experimental performance characterization techniques for building components. Research awards of in excess of £4 million have been awarded to support his research from funding bodies including the EPSRC, EU, and TSB. He has published over 170 papers and supervised 13 PhD students to successful completion.

Professor Eames chairs the Solar Thermal Technical Panel for the World Renewable Energy Congress. He has a B.Sc. in Engineering Mathematics from the University of Bristol and a M.Sc. in Energy Conservation and the Environment and PhD in Applied Energy from Cranfield University, UK.

Dr. Falah S. Hasoon



For more than 25 years, Dr. Falah Hasoon is actively involved in research in the areas of material growth and characterization of photovoltaic materials and device processing. Dr. Hasoon has Master degree in Physics from University of Bath, England, UK and he has Ph.D. degree in Electrical Engineering from University of Salford, England, UK. Dr. Hasoon is a senior scientist at National Renewable Energy Laboratory, and he is a research professor at Colorado School of Mines, in Golden, Colorado, USA. He has more than 120 scientific research publications and he is an inventor of four US patents.

The long term experience of Dr. Hasoon covers wide range of material growth techniques such as vertical Bridgeman method, iodine vapor transport technique, solution growth method, physical vapor deposition, and closed space sublimation.

Whereas, his experience in the growth of semiconductor thin film materials includes growth of ternary and multinary semiconductor compounds such as CdTe/CdS, CuInGaSe₂/ZnO, CuInGaSe₂/ZnMgO. Furthermore, Dr. Hasoon's interests include design and fabrication of growth and characterization research tools. His current primary research interest is the growth and characterization of silicon material and devices.

Dr. David S. Renné



Since 1991 Dr. Renné has been at the National Renewable Energy Laboratory, developing and managing programs on renewable energy resource assessment and analysis, and the integration of resource data into GIS. His expertise is in solar resource assessments, and he is currently the Operating Agent of an International Energy Agency Solar Heating and Cooling Programme Task titled “Solar Resource Knowledge Management”. He also currently manages the US Department of Energy’s Solar Resource Assessment activities funded under the Solar Energy Technology Program. Much of his recent work at NREL has been for international organizations such as the US Agency for International Development and the United Nations Environment Program. In these programs he has managed solar and wind energy resource assessments and the development of GIS tools for a number of countries, including several countries in Asia and South Asia, Central

America, South America, and Africa.

Dr Renné is currently the President of the International Solar Energy Society (ISES), which was founded in 1955 and whose membership represents a major global network of renewable energy scientists and practitioners. ISES has over 50 Sections around the world, including the American Solar Energy Society, for which Dr. Renné is a past board member. He also serves as an Associate Editor in the area of Resource Assessment for the Solar Energy Journal, the primary scientific magazine of ISES.

Prior to coming to NREL he was a senior program manager at Pacific Northwest National Laboratory, where he was heavily involved in both domestic and international wind studies, such as the U. S. Candidate Site wind measurement program, and a wind resource assessment study for Egypt. Dr. Renné received his Masters and PhD at Colorado State University in Atmospheric Sciences and Earth Resources.

Professor John K. Kaldellis



He holds a Mechanical Engineering Degree from the National Technical University of Athens (NTUA) and a Business Administration Diploma from the University of Piraeus. He obtained his PhD from NTUA sponsored by Snecma–Dassault, France. He is currently the Head of the Mechanical Engineering Department and the Head of the Soft Energy Applications and Environmental Protection Laboratory (since 1991) of the Technological Education Institute of Piraeus. Prof J.K. Kaldellis is also the Scientific Director (for TEI of Piraeus) of the MSc in Energy program organized by Herriot Watt University and TEI of Piraeus.

Prof Kaldellis expertise focuses in technological developments in the energy and environmental sector and has accumulated significant academic and professional experience in various contemporary energy and environmental issues. More specifically, his research interests include feasibility analysis of energy applications and projects, technological advancements in wind, hydro and solar energy market, hybrid energy-energy storage systems, social attitude towards renewable energy applications and environmental technology-atmospheric pollution. Prof Kaldellis has participated in numerous research projects, funded by the European Community, European/Greek Industries and the Greek State.

Prof Kaldellis has published six books concerning the Renewable Energy Applications and the Environmental Protection and he is the author of almost one hundred (100) papers in International peer reviewed Journals and more than 250 papers in International Technical/Scientific Conferences. He is also the Editor of International Conference Proceedings and Books related with RES applications and Hybrid Energy Systems. During the last decade he is also Member of the Scientific Committee of the Hellenic Society of Mechanical-Electrical Engineers as well as member of the organizing and scientific committee of several national and international conferences.

He is currently Associated Editor (Member of Editorial Board) of the Renewable Energy International Journal and reviewer in several International Journals in the Energy and Environment Sector, like *Renewable Energy*, *Energy Policy*, *Solar Energy*, *Desalination*, *Energy*, *Applied Energy*, *Wind Energy*, *Journal of Global Energy Issues*, *Journal of Environmental Management*, *IET Renewable Power Generation*, *Journal of Power and Energy*, *Journal of Electrical Power and Energy Systems*, *Fuel*, *Journal of Environmental Planning and Management*, *Bioresource Technology*, *Fresenius Environmental Bulletin*, *Journal of Hydrogen Energy*, etc.

Dr. Gouri Datta



Dr Datta is presently Senior Reader in University of Delhi India. She completed her M Sc in Physics from Calcutta University and PhD in Solar energy applications from Indian Institute of Technology, Delhi in 1984. Her research work has mainly been on solar air and water heaters, drying, solar radiation, storage, collector testing and passive solar architecture. She has more than eighty publications in international journals and conferences in these fields and has completed several research projects including an international project on solar energy with Italy. Dr Datta has attended more than 50 International conferences and has been an invited/keynote speaker on several occasions, as well as been an organizer for many Solar energy workshops. She has had many foreign research assignments; including the SERC fellowship to work in SERC, Borlange Sweden (1990) on Solar collector geometries at high latitudes. Dr Datta was awarded the prestigious TRIL fellowship from ICTP Trieste Italy (1998) to work with ENEA Rome on Solar passive architecture, and the DST fellowship (1996) to work in MNES lab in

Gurgaon on Solar collector testing. She is also a member of 8 International Societies including WREN and is on the executive of ICTP. Dr Datta is also interested in Physics and Philosophy and has presented papers on correlation between ancient Hindu religion and solar science in ancient times in India- particularly on astronomy and cosmology. At present she is Convener in the Gender Sensitization committee at her institute, which has initiated her to study the plight of women in India's rural areas. She is making efforts to reduce the vulnerability of these rural women and empower them by sustainable energy use.

Dr. Chuck Kutscher



He is a Principal Engineer and Manager of the Thermal Systems Group at the National Renewable Energy Laboratory in Golden, Colorado where he currently leads the research on parabolic trough solar collector systems. He is a Past Chair of the American Solar Energy Society (ASES) and was General Chair of the SOLAR 2006 national solar energy conference held in Denver, which led to the 200-page ASES report, *Tackling Climate Change in the U.S.*, available at www.ases.org/climatechange. He is an adjunct professor at the University of Colorado at Boulder, where last fall he developed and taught a course entitled "Climate Change Solutions." He also writes a monthly column about addressing climate change for *SOLAR TODAY* magazine. He has given many invited presentations around the country on renewable energy and climate change. He was the keynote speaker for the first "Colorado's New Energy Economy" Conference in October 2007, and this past January he received the 2008 Governor's Excellence in Renewable Energy Individual Award.