

**EUROSUNMED International School on Photovoltaics,
Concentrated Solar Power, Storage and Grid Integration
“State-of-the-Art on Renewable Electricity Generation”**

7 – 10 April 2014

Venue: MAScIR (Moroccan Foundation for Advanced Science, Innovation and Research), Rabat, Morocco
AGENDA (Final version)

Monday 7 April

Item	Content	Speaker	Time	
	Registration		9:00	
Opening ceremony	Welcoming words by: <ul style="list-style-type: none"> • EUROSUNMED: Mr. Abdelilah SLAOUI, Project Coordinator • MAScIR: Mr. Rachid BENMOKHTAR, Vice président MAScIR Vice-President and Minister of National Education • Mrs. BEN KHALDOUN, Deputy Minister of Scientific research of Morocco • MASEN: Mr. Mustapha BAKKOURY, MASEN President 		10:00 – 11:00	
	Lunch		12:30	
	Session 1: ReEn in the EU-MENA	Status of renewable electricity generation in the Maghreb region	Nabil Saimi, MASEN, Morocco	14:00
		Development of PV technologies suitable for Moroccan Energy Plan From Lab to Fab	Abdallah Ougazzaden, UMI Georgia Tech-CNRS, France	14:45 – 15:45
Grid issues from renewables		Harald Svendsen, SINTEF E, Norway	16:15 – 17:15	
Renewable energy development in the EU-MENA region		Alaa Alhamwi NEXT ENERGY, Germany & Abdelilah Slaoui, CNRS, France	17:15-18:00	
Dinner			19:00	

Tuesday 8 April

Item	Content	Speaker	Time
Session 2: Photovoltaics	An overview of PV market & crystalline silicon technology <ul style="list-style-type: none"> • Silicon based technologies • Thin film based technologies 	Yannick Veschetti, INES, France & Nicolas Barreau, IMN, France	8:30 – 12:30
	Lunch		12:30
Session 3: Concentrated Solar Power (CSP)	<ul style="list-style-type: none"> • Introduction to CSP technology • General characteristics and state of the art • Future R&D action lines and perspective • Commercial experiences worldwide • Cost analysis • Markets and business opportunities • Conclusions 	Marcelino Sanchez, CENER, Spain & Cristóbal Villasante, IK4-TEKNIKER, Spain	14:00 – 18:00
	Dinner		

Wednesday 9 April

Item	Content	Speaker	Time
Session 4: Electrical Storage Systems	<ul style="list-style-type: none"> • Electrical system and storage • Technologies • Management strategies • Tools • Case studies 	<p>Raquel Garde, CENER, Spain & Cristóbal Villasante IK4-Tekniker, Spain</p>	<p>8:30 - 12:30</p>
Lunch			12:30
Session 5: Thermal Storage Systems	<ul style="list-style-type: none"> • Technologies, • Storage materials • Management strategies • Case studies 	<p>Abdessamad Faik CICenergigune, Spain & Xavier Py, PROMES/ODEILLO, France</p>	<p>14:00 - 16:00</p>
POSTER SESSION			16:30 - 18:30
Dinner			19:00

Thursday 10 April

Item	Content	Speaker	Time
Session 6: Grid	<ul style="list-style-type: none"> • Technologies • Management strategies • Case studies 	<p>Monica Aguado, CENER, Spain & Olimpo Anaya-Lara, Strathclyde University, UK</p>	<p>8:30 - 12:30</p>
Lunch			12:30
Session 7: EBSILON Software	<ul style="list-style-type: none"> • General Presentation • Practical work 	<p>Hans-Peter Wolf, STEAG, Germany</p>	<p>14:00</p>
BANQUET			19:00

Friday 11 April

EUROSUNMED-REELCOOP Joint Workshop (see separate agenda)

Speakers (in alphabetical order)

 <p>Monica Aguado</p>	<p>Monica Aguado is the Director of the Renewable Energy Grid Integration Department at CENER. She has a Ph.D. in Industrial Engineering and more than 17 years of experience as a researcher and engineer. She has developed her career in both the private and public sector. Monica is an expert in Power Electrical Systems mainly on two aspects: grid integration of renewable energies and aspects related to electromagnetic transients in power systems. She is a professor in the Electric and Electronic Engineering Department in the Public University of Navarra and from 2003 combines her position as Professor at the University with her role as Director of IRE Department of CENER. She is the author of numerous scientific publications, has participated in a large number of national and international expert groups, committees and conferences, related to different domains ranging from electric engineering to energy storage with hydrogen. She is also the author of a patent and expert evaluator in national and international evaluation processes. She has been the main researcher in several projects.</p>
 <p>Alaa Alhamwi</p>	<p>Alaa Alhamwi is a doctoral researcher at NEXT ENERGY- EWE Research Centre for Energy Technology at Oldenburg University, Germany. Alaa holds a Bachelor in Mechanical Power Engineering from Aleppo University, Syria and double degree Master of Science (M.Sc.) in Renewable Energy and Energy Efficiency for the Middle East and North Africa (REMENA) from the University of Kassel in Germany and Cairo University in Egypt. He worked as a researcher with the Research Topic "Energy Systems 2050" at NEXT ENERGY research centre focussing on the energy systems transition towards sustainability and the integration of renewable energies in the EU-MENA region.</p>
 <p>Olimpo Anaya-Lara</p>	<p>Olimpo Anaya-Lara is a Reader in the Institute for Energy and Environment at the University of Strathclyde, UK. Over the course of his career, he has successfully undertaken research on power electronic equipment, control systems design, and stability and control of power systems with increased wind energy penetration. Dr Anaya-Lara is a key participant to the Wind Integration Sub-Programme of the European Energy Research Alliance (EERA) Joint Programme Wind (JP Wind), leading Strathclyde's involvement and contribution to this Sub-Programme. He was appointed to the post of Visiting Professor in Wind Energy at NTNU, Trondheim, Norway funded by Det Norske Veritas (2010-2011). He was a member of the International Energy Annexes XXI Dynamic models of wind farms for power system studies and XXIII Offshore wind energy technology development. He is currently a member of the IEEE and IET, and has published 3 technical books, as well as over 140 papers in international journals and conference proceedings.</p>
 <p>Nicolas Barreau</p>	<p>Nicolas Barreau received his PhD in Materials Science at the Université de Nantes (Nantes, France) in 2001; his PhD works have been awarded by the Young Scientist Award of the E-MRS in 2001. He then moved to a post-doc position at the Hahn-Meitner Institut in Berlin (2002-2003) in the group of Prof. Lux-Steiner. Since 2005, he is Assistant Professor at the Université de Nantes, working on CIGSe-based solar cells at the Institut des Matériaux Jean Rouxel (IMN). In 2010, he obtained his habilitation thesis to supervise researches (habilitation à diriger des recherches).</p>
 <p>Abdessamad Faik</p>	<p>Abdessamad Faik is an Associate Researcher at CICenergigune in Vitoria, Spain, and is working on different fields within thermal energy storage. He holds a PhD in physics from the University of Basque Country in Bilbao, Spain and has been a Post-Doctoral fellow at CNRS/CEMTHI in Orleans, France, where he studied and developed innovative and original materials for sensible thermal energy storage. Abdessamad has also worked for the German Aerospace Center (DLR) in Stuttgart, Germany, as a guest scientist and at IRESEN in Rabat, Morocco, as Head of Thermal Systems Department.</p>
 <p>Raquel Garde</p>	<p>Raquel Garde holds a Ph.D. in Inorganic Chemistry and has 18 years of international experience in the field of chemistry, physics and energy. She has developed most of her outstanding research career at the university (Spain, Germany and France) and at CENER, where she has been responsible of the Energy Storage Group from 2002. Her current position is Technical Manager of Energy Storage Area at the Renewable Energy Grid Integration IRE Department. She works mainly on Hydrogen and Fuel Cells and Electrochemical Energy Storage Systems as well as Demand Side Management with electric vehicles, cold warehouses, pump heating, etc. Author of numerous scientific publications and conferences, has participated in a large number of national and international projects, expert groups, and committees.</p>
 <p>Mohammad Khaleel</p>	<p>Mohammad Khaleel is the Executive Director of the Qatar Energy and Environment Research Institute. Prior to his employment at the Qatar Foundation, he was the Director of Pacific Northwest National Laboratory's Computational Sciences and Mathematics (CSM) Division and a Laboratory Fellow. He was the co-Director of the Northwest Institute for Advanced Computing (NIAC) located at the University of Washington, Seattle, Washington. Mohammad was an Adjunct Professor at Washington State University's School of Mechanical Engineering and Materials Science. He held graduate faculty advisor positions at the Université Louis Pasteur, Strasbourg, France; University of Metz, Metz, France. Dr. Khaleel published over 250 journal articles.</p>

 <p>Abdallah Ougazzaden</p>	<p>Abdallah Ougazzaden is a Professor in the School of Electrical and Computer Engineering and is based at Georgia Tech Lorraine in Metz, France. In spring 2006, he was appointed Director of the International Joint Research lab (UMI) Georgia Tech- ONERA. He worked at CNET/ France Telecom for more than 8 years and spent a year at Optoplus/Alcatel, Then he joined Bell Labs Lucent technologies as Technical Manager of the Epitaxial Growth R&D group. His current research activity at Georgia Tech is in the field of Nitride-based wide band gap semiconductors and nanoheterostructures using selective area growth (SAG) by MOVPE. He has authored and co-authored more than 240 international scientific papers and holds 20 patents.</p>
 <p>Xavier Py</p>	<p>Xavier Py is professor at University of Perpignan and carries out his research at PROMES. He is in charge of all CSP energy storage related projects in the PROMES/CNRS laboratory. His current research activities are related to advanced thermal energy storage materials (in terms of thermal conductivity and heat exchange interface), energy storage materials made of recycled industrial wastes and their integration in a CSP energy storage system. He has published more than 40 international papers in peer review journals, 5 patents and numerous international conference proceeding papers. He was leader of related work package in European projects such as Distor of Sfera and is coordinator of various ANR programs such as Solstock, Sesco or DryRSP.</p>
 <p>Nabil Saimi</p>	<p>Nabil Saimi is the Director of International Cooperation at MASEN, the Moroccan Agency for Solar Energy, where his is responsible for the development of the export busICube of solar energy, and managing the international cooperation projects. His previous experiences include a Senior Quantitative Analyst position at Pacific Gas & Electric Company, in San Francisco. He has also worked in investment banking, as exotic derivatives senior analyst for CDP Capital in Canada, and Risk management position at Hydro-Quebec. He holds a bachelor in Applied Mathematics and Physics, a Master in Applied Maths and Computer Science and is a Ph.D candidate in Quantitative Finance at McGill/HEC-Montreal.</p>
 <p>Marcelino Sanchez</p>	<p>Marcelino Sanchez has more than 24 years of international research experience in R&D projects, in the area of solar thermal energy, especially in projects related to the electricity production from solar thermal energy. He has held, among others, the following positions: R&D Director at Abengoa Solar New Technologies, Responsible of the High Concentration Working Group at CIEMAT, Solar thermal expert at Solargen Europe Ltd; Technical consultant for Energy for Sustainable Development Ltd. He is the author of numerous scientific publications and 8 patents, 6 of which are related to innovative solar energy concepts. He has also participated in numerous expert groups and committees as International Expert.</p>
 <p>Abdelilah Slaoui</p>	<p>Abdelilah Slaoui received his PhD degree in semiconductor physics in 1984 at Laboratory PHASE/France, where he focused on laser crystallisation of implanted silicon for solar cells. He joined CNRS in 1986 as a researcher to work on laser processing for photovoltaics and microelectronic devices. In 1992 he joined the Oregon Graduate Institute at Beaverton, Oregon, USA as a visiting scientist. He is presently Directeur de Recherche at ICube, CNRS/ Strasbourg University, and the head of the department of Materials for electronic and photovoltaics devices (MaCEPV). He has authored or co-authored more than 220 papers in Journals and Proceedings and contributed to books, and he has edited special issues and proceedings. He co-organized many symposia on materials for photovoltaic as well as workshops/schools on Materials for Energy. Abdelilah served as President of the European Material Research Society (E-MRS) in 2007-2009. He also worked as an expert for national and European projects.</p>
 <p>Harald Svendsen</p>	<p>Harald Svendsen is a Research Scientist at SINTEF Energi AS since 2009. He obtained his PhD in Mathematical Sciences at Durham University (UK, 2004) and has previously worked at the Max Planck Institute for Gravitational Physics (Germany, 2005–2007) and Senergy Econnect (UK, 2007–2009). His research activities have focussed on grid integration and control of offshore wind power, with emphasis on modelling, simulations and development of software tools.</p>

 <p data-bbox="180 481 357 506">Yannick Veschetti</p>	<p data-bbox="411 293 1428 495">Yannick Veschetti obtained his PhD in Physics at Strasburg's University in 2005. His research concerned the development of new silicon solar cells technologies adapted to thin substrates. He joined CEA-INES in 2005 to work on advanced high efficiency cell technologies, where he has been in charge of academic and industrial research programs. Based at INES (National Institute for Solar Energy) in Chambéry, Yannick developed through the previous years a field of expertise concerning silicon material, cells and modules. He's currently head of a laboratory dedicated to the development of homojunction silicon solar cells.</p>
 <p data-bbox="172 736 365 761">Cristobal Villasante</p>	<p data-bbox="411 539 1428 741">Cristobal Villasante has MSc in Mechanical Engineering with more than 17 years of experience in R+D projects. In 1994 he started working in IK4-TEKNIKER involved in dynamic analysis for mechatronic design. During the following years participated and/or coordinated national and international projects for machine design on different sectors. From 2006 he acts as coordinator for solar thermal projects and at 2007 he became the Head of Thermal Engineering Unit. From 1999 to 2008 he combined research at IK4-TEKNIKER with teaching at Universidad de Deusto as professor for "Machine Design". Nowadays he also coordinates activities for Solar Thermal Electricity Industry at IK4 Research Alliance.</p>
 <p data-bbox="185 956 355 981">Hans-Peter Wolf</p>	<p data-bbox="411 775 1428 943">Hans-Peter Wolf is a specialist in the field of powerplant modelling and simulation. He holds a Physics Diploma (M.Sc.) from the Technical University of Darmstadt and a Ph.D. from the same institution. He has more than 20 years of industrial experience in software applications for process and energy technologies, whereof more than 10 years are associated with modelling using the EBSILON software. Additionally to executing projects for Steag Energy Services, Germany, he is a lecturer in process simulation at the Nuremberg Institute of Technology (TH Nürnberg).</p>