An overview on the energy transition: from the boost of renewables to the local and smart use of energy

Thursday, February 29 (h. 15-17), Room B+ @ DIISM.
The science of the climate crisis. Prof. Giovanni Di Nicola.
Some fixed points to understand the situation. A bit of Physics. Greenhouse gases and Keeling curves. The climate as a complex system. Tipping points. IPCC, future scenarios and COP. Information vs science. The growth of awareness towards decarbonisation. Electrification: Where are we today?

Thursday, March 07 (h. 15-17), Room B+ @ DIISM.
Renewable energies for a sustainable development. Prof. Fabio Polonara.
The climate change challenge that our planet is currently facing can be won only if mankind removes its causes. One possible solution is the decarbonisation of the energy sector, that can be implemented through the improved efficiency of final uses and, mainly, through a massive increase of renewable energy production. We demonstrate that this is technically and economically feasible, even though many barriers still exist that need to be overcome as soon as possible.

Thursday, March 14 (h. 15-17), Room B+ @ DIISM.
Sustainable development: the role of hydrogen and nuclear. Prof. Fabio Polonara.
Hydrogen is, according to many, one of the most important tools for the decarbonisation of the energy sector. Going through its chemical and physical properties we explore pros and cons of hydrogen as an energy carrier, concluding that it is not the best solution for many final uses but can be an important instrument for the decarbonisation, especially for the so called "hard-to-abate" sectors.
Nuclear energy is continuing to generate a never ending debate between those who are in favor of it and those who are against. We will try and list all the pros and cons of the technology in a way that is as much neutral and scientifically grounded as possible, in order to give everybody the tools for an educated choice.

Thursday, March 21 (h. 15-17), Room B+ @ DIISM.
Energy storage systems and hydrogen: a new challenge for the future energy scenarios. Dr. Mosè Rossi.
This lecture has the aim to provide the students with information of the main energy storage technologies available nowadays. In particular, the role of hydrogen in the decarbonization path towards the goal of zero-net emissions by 2050 will be discussed in detail, as well as the involved technologies for its sustainable production.

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Tuesday, March 26 (h. 15-17), Room A1 @ DIISM.
Global vs. Local: why and how we killed so many people to save the World. Prof. Giorgio Passerini.
This lecture has the aim to provide the students with another point of view regarding the true impact of "good" practices we have been employing in the past years to reduce the anthropogenic environmental impact in terms of global warming. The lecture will focus on Italian and European situation and will provide data for a more realistic assessment of the true impact of old technologies and new technologies.

Thursday, April 04 (h. 15-17), Room B+ @ DIISM.
On the brilliant world of solar cooking: experiences and thoughts. Prof. Celestino Ruivo.
Professor at the University of Algarve, Portugal, Celestino Ruivo turned his passion for the sun's power into a culinary revolution. Since catching the solar cooking 'bug' in 2006, he's been an ardent advocate, sharing the simplicity and joy of harnessing solar energy for cooking. Chairman of the CONSOLFOOD conferences, Prof. Ruivo unites global experts and communities under the warm embrace of the sun, transforming rooftops into eco-friendly kitchens. Join him to explore how solar cooking is not just a method, but a movement towards a sustainable future.

Thursday, April 11 (h. 15-17), Room B+@ DIISM.
Local Energy Communities (LECs): concepts, architectures, and future outlook for a new way of thinking the energy. An overview of both European and Italian situation. Dr. Mosè Rossi.
This lecture has the aim to provide the students with an overview of the new way of energy production, consumption, and management. In particular, the main aspects regarding the build-up of Local Energy Communities (LECs) will be analysed, as well as the outcomes coming from research, studies and participation in H2020 projects by UNIVPM. In particular, both European and Italian energy frameworks will be analysed.

Link:
https://teams.microsoft.com/l/team/19%3A15ae0c36645f47478c840c226c980997%40thread.tacv2/conversations?groupId=a0cf0c1b-de8b-4032-8375-56c6d6369ba3&tenantId=117b418d-fb21-416f-a85f-1e9ff725bf2c

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