

NGPT 2016

1st School on «NanoEnergy and Nanosystems»

Rome, June 13-14, 2016

The **School** will cover the fundamentals on **NanoEnergy and NanoSystems**, ranging from basic theory to devices and applications.

The **School** will comprise **6 Lectures** and **2 Round-Tables** (see the Program below).

Taking into account the cross-disciplinary nature of the audience, **each Lecture** is divided into two parts:

- **Tutorial**
- **Seminar**

The **Tutorials** will introduce all the key concepts needed during the **Seminars** and will be easily followed by anyone who is familiar with the general math, physics and chemistry taught in B.Sc. Engineering/Physics/Chemistry.

The **Round Tables** will offer advice from leading experts on how to perform effective research and how to bring innovative devices on the market.

Who should attend? The School is ideal for anyone with an interest in NanoEnergy and NanoSystems, including students, researchers, professors.

Pre-registration is open (falconi@eln.uniroma2.it). **Limited places available only!**

School Program

First Day (June 13 – Monday)

| | | |
|---------------|--------------------------|--|
| 9:00 – 10.30 | Philip Kim | <i>Materials in 2-dimension and beyond: 10 years after graphene</i> |
| 11:00 – 12:30 | Christian Falconi | <i>Electronic instrumentation for NanoEnergy and NanoSystems</i> |
| 13:00 | Lunch | |
| 14:00 – 15:30 | Zhong Lin Wang | <i>Introduction of nanogenerators</i> |
| 16:00 – 17:30 | Sang-Woo Kim | <i>New Energy Harvesting with Nanogenerators for Self-Powering Small Electronics</i> |

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Second day (June 14 – Tuesday)

| | | |
|---------------|-------------------------|--|
| 9:00 – 10:30 | Zhong Lin Wang | <i>Introduction of piezotronics</i> |
| 11:00 – 12:30 | Luigi Occhipinti | <i>How to design and manufacture reliable and cost-effective flexible and disposable electronic devices</i> |
| 13:00 | Lunch | |
| 14:00 – 15:30 | Max Migliorato | <i>Theory of Piezoelectricity in Polar Semiconductors</i> |
| 16:00 – 17:00 | Round table I | <i>How to make effective research on NanoEnergy and NanoSystems (Introduction: Prof. Zhong Lin Wang; moderator: Prof. Arnaldo D'Amico)</i> |
| 17:00 – 18:00 | Round table II | <i>How to bring innovative devices on the market (Introduction: Dr. Luigi Occhipinti; moderator: Prof. Arnaldo D'Amico)</i> |

The teachers



Arnaldo D'Amico

**Introduction to questions and answers
(for all the lectures)**

Moderator for the Round Tables

*University of Rome Tor Vergata
(Professor Emeritus)*

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Zhong Lin Wang

Introduction of nanogenerators

Introduction of piezotronics

Introduction to Round Table I

*Georgia Institute of Technology, USA
Beijing Institute of Nanoenergy and Nanosystem,
Chinese Academy of Sciences, China
<http://www.nanoscience.gatech.edu/>*



Luigi G. Occhipinti

**How to design and manufacture
reliable and cost-effective
flexible and disposable electronic devices**

Introduction to Round Table II

*University of Cambridge, United Kingdom
www.largeareaelectronics.org*



Sang-Woo Kim

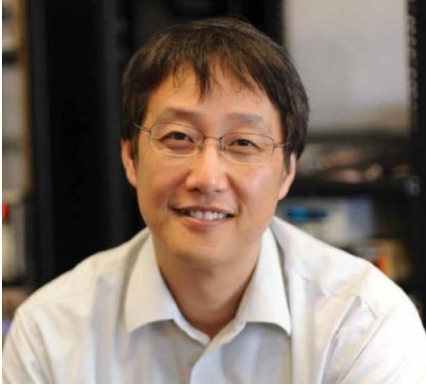
**New Energy Harvesting with Nanogenerators
for Self-Powering Small Electronics**

*SKKU, Republic of Korea
<http://nesel.skku.edu>*

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Philip Kim

**Materials in 2-dimension and beyond: 10
years after graphene**

Harvard University, USA

<http://users.physics.harvard.edu/~pkim/>



Max Migliorato

Theory of Piezoelectricity in Polar Semiconductors

University of Manchester

<http://www.manchester.ac.uk/research/max.migliorato/>



Christian Falconi

**Electronic measurements
for NanoEnergy and NanoSystems**

University of Rome Tor Vergata – IDASC CNR

<http://next.uniroma2.it/>