

Dear Members of the SPIN International Advisory Board,

CNR is setting a new scheme for the internal research organization. Each CNR Department will be organized in scientific "Programs". For the Department "Physics and Technologies of the Matter" (where SPIN operates) these should be :

- Innovative Materials
- Devices and Sensors
- Quantum Technologies
- Lasers and Photonics
- Complexity and Biology
- Methodology and Instrumentation

Each Institute of the Department will operate inside these Programs, through specific "Projects", leaded by an high level researcher.

I need your advice to set down a tentative list of those Projects (names and short list of contents (max two lines)), to propose first to our researchers and then to the Department Director who will formally take the final decision.

For your reference , the present organization is the following :

1.1) Superconductivity: materials, mechanisms and technological transfer
(Marina Putti, Genova)

1.2) Static and dynamic properties of type-II superconductors, and their functional use for energy applications (Gaia Grimaldi, Salerno)

2.1) Quantum and non-equilibrium effects in junctions and hybrid nanostructures
(Francesco Tafuri, Naples)

2.2) Superconducting and hybrid materials devices
(Carla Cirillo, Salerno)

3.1) Realization and study of materials with strong spin, charge and orbital correlations
(Antonio Vecchione, Salerno)

3.2) Growth and characterization of epitaxial and nanostructured films, and interfaces: pulsed laser deposition, in-situ analysis, optical, magnetic and transport properties
(Domenico Paparo, Naples)

3.3) Structural, electronic and vibrational properties of strongly-correlated systems
(Silvia Picozzi, L'Aquila -Rome)

4.1) Functional materials and novel devices for electronics and energy
(Daniele Marre', Genoa)

4.2) Fundamental properties of functional materials suitable for application in energetics
(Pasquale Orgiani, Salerno- Rome)

4.3) Emerging routes for the control of the (opto)electronic properties of multifunctional materials and devices

(Mario Barra, Naples)

5.1) Models and first-principles approaches for functional materials and complex systems

(Vittorio Cataudella, Naples)

5.2) Quantum nano devices and complex systems

(Maura Sasseti, Genoa)

As you see (and know) we have then now 5 main research lines (commesse) divided in 12 "sub-lines" (moduli).

In the new organization we should probably stay with a number of Projects within these two limits.

The idea would be, also based on your last Report, to maintain the more productive research lines, in a revised form with more appealing keywords, to cut the less productive ones, to introduce new emerging lines , and, after that, to select the research leaders between the more brilliant and motivated young scientist that have already proven their value at international level in the specific field.

Of course each Project should attract a reasonable number of SPIN researchers, possibly mostly operating in the same (or close) SPIN locations.

Please keep in mind that the six ICIB researchers are then operatively inserted into SPIN for the activities of 2014.

Of course Ruggero Vaglio, that is fully aware of the old and new organization, will be the right person to clarify further doubts and to address your internal discussion.

You can take the time you need, I would be happy to have your indications within February 15th.

I take this opportunity to send you my best wishes for a 2014 full of success and serenity.

carlo