

WELCOME TO THE NANOTECH WORLD



7th
EDITION



nanoforum

micro and nanotechnologies:
where research meets business

ROME, 14th - 15th September 2011

*Faculty of Engineering - St. Peter in Chains' Campus
at Sapienza University of Rome, Via Eudossiana 18*



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Per poter apprezzare nel modo migliore il programma di nanoforum 2011 si suggerisce di partecipare ai tutorial, alle sessioni di conferenza di proprio interesse e all'evento satellite, e di visitare l'expo.

Infine, la preghiamo di riempire il modulo di valutazione: >> www.nanoforum.it

In order to take all the best of nanoforum 2011 we suggest to participate to the conference sessions and the satellite events, and to visit the Expo.

But not least, fill in the evaluation form: >> www.nanoforum.it

■ ORARI DI APERTURA

13 settembre: 14.00 - 18.00

14 settembre: 08.30 - 18.00

15 settembre: 08.45 - 18.00

■ ISCRIZIONE

Grazie al contributo di Partner, espositori e sponsor, la partecipazione a nanoforum 2011 è totalmente gratuita. È sufficiente compilare il modulo che si trova all'indirizzo

www.nanoforum.it/iscrizione

■ COME ARRIVARE

Nanoforum 2011 si terrà presso la Facoltà di Ingegneria - Sede di S. Pietro in Vincoli - dell'Università Sapienza di Roma, via Eudossiana 18, 00184 Roma.

■ AGGIORNAMENTI

Le agende dei convegni, l'elenco delle aziende / istituzioni coinvolte e tutte le iniziative connesse a nanoforum 2011 sono disponibili sul sito www.nanoforum.it.

■ ORGANIZZAZIONE

Nanoforum è un progetto ideato e organizzato da:
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■ TIME TABLE

13th September

from 2.00 pm to 6.00 pm

14th September

from 8.30 am to 6.00 pm

15th September

from 8.45 am to 6.00 pm

■ SUBSCRIPTION

Thanks to the support of Institutions, Exhibitors and Sponsor, the participation to nanoforum 2011 is completely free, under subscription: www.nanoforum.it/registrationform

■ HOW TO REACH

Nanoforum will take place at the Faculty of Engineering, St. Peter in Chains' Campus at Sapienza University, Via Eudossiana 18, 00184 Rome, Italy

■ UPDATE

Conference plan, companies and institutions' list are available on the website www.nanoforum.it/en

■ STAFF

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The organisation has made great efforts to realize this guide but it doesn't take the responsibility for any errors, omissions or changes on programmes.

WELCOME



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Gentile Partecipante

Benvenuto e grazie per essere qui con tutti noi a nanoforum 2011.

Un ringraziamento che inizia dal Comitato d'Onore che ha dato le indicazioni per la direzione da seguire, che si estende al Comitato Promotore che le ha interpretate e indicate all'Organizzazione, all'Università Sapienza che ospita e collabora attivamente all'evento, ai Partner, agli Espositori e agli Sponsor che hanno sostenuto il progetto e consentito l'ingresso gratuito a tutta la manifestazione, fino a giungere a Lei che qui, oggi, può valutare concretamente il risultato dell'impegno di tutti.

Questa edizione è particolarmente importante per l'ampliamento dei tutorial (progettati non solo per chi vuole conoscere le nanotecnologie ma anche per chi desidera reperire informazioni e capitali per avviare una propria impresa), e per le sessioni di Conferenza che iniziano con la presentazione di start-up, e, dopo la plenaria, proseguono affrontando temi di grande attualità.

Un evento che consente di conoscere ed ascoltare molti dei maggiori esperti del settore.

Ma c'è ancora un aspetto a cui tutti, sicuramente, teniamo molto: la valorizzazione della nostra ricerca.

Quella ricerca italiana che con pochi capitali e molto ingegno non sfigura nel mondo.

In particolare, il Presidente dell'ANVUR (Agenzia Nazionale di Valutazione del sistema Universitario e della Ricerca), Prof. Fantoni, è il moderatore della sessione dedicata alle start-up. Sono certo che vorrà adoperarsi affinché tra i parametri di valutazione della Ricerca non vi siano solo il numero di pubblicazioni o gli "indici" (H-index, H-IF, ...) ma anche i risultati economici, specie se rapportati a quelli di altri Paesi europei.

Dear Participant

I welcome you to nanoforum 2011 and I thank you for joining us.

First of all, my thanks go to the Honour Committee, which has shown the proper directions to be followed, together with the Promoting Committee, which has taken this input and helped the Organization to realize it with essential recommendations. I also would like to thank the Sapienza University of Rome, hosting the event and actively involved in the nanoforum's project, and our Partner, Exhibitors and Sponsor, who have supported the project and made it possible to grant free access to the event.

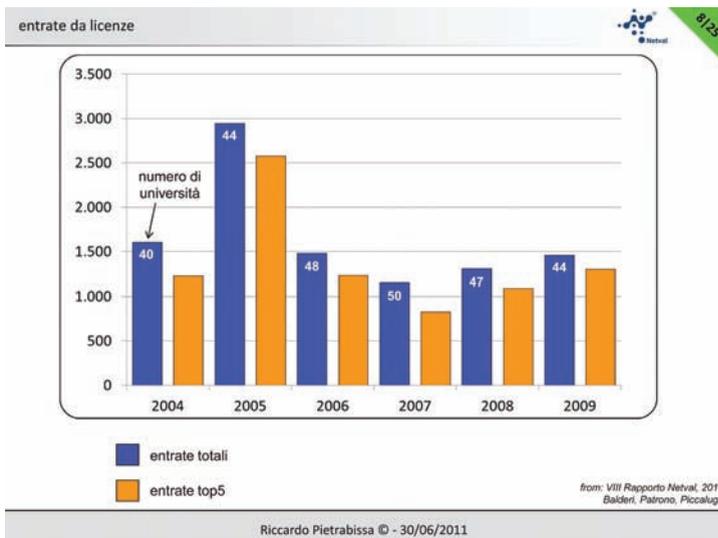
My warm thanks to you too, dear participant of nanoforum 2011, who can positively appreciate the efforts of all of us to offer you an interesting and satisfying event.

This seventh edition of nanoforum is made particularly relevant by the increased tutorial sessions (addressing not only those who want to know nanotechnologies but also who is looking for information and funding to start a new business in the nanotech field) and by the new Conference plan, starting with a Startup Presentation session and including, after the Plenary session, different sessions focusing on topical issues of great interest.

nanoforum 2011 gives you the right opportunity to know and meet many of the major experts in the field.

And now, let us move on to another aspect, which - I am sure - is really important for all of us: the valorisation of our national research, the Italian research, still maintaining a high reputation all over the world thanks to a lot of talent and despite the few funding.

The President of ANVUR (National Agency for University system and Research Evaluation), Prof. Fantoni, is chairman of the Startup Presentation session, and I am confident that he will do his best in order to count in



Licensing revenues by country

Country	All countries	Denmark	Italy	Spain	UK	France
Last year available	(2009)	(2009)	(2009)	(2009)	(2009)	(2007)
Total revenues	€ 70.6 M	€ 11.1 M	€ 1.5 M	€ 2.6 M	€ 55.4 M	€ 8.5 M
Top 5 KTOs (% on total revenues)	€ 28.8 M (40.8%)	€ 10.9 M (98.2%)	€ 1.3 M (89.2%)	€ 1.7 M (64.7%)	€ 25.6 M (46.2%)	n.a.
Average revenues per KTO	€ 262.3 K	€ 857.0 K	€ 33.1 K	€ 48.4 K	€ 350.3 K	€ 130.3 K
Average revenues per KTO (non-zero values)	€ 496.9 K	€ 1.6 M	€ 91.1 K	€ 74.7 K	€ 659.0 K	€ 217.2 K
Number of KTOs	254	13	44	54	158	65

Due grafici, il primo tratto dall'VIII Rapporto Netval 2011 (NETwork per la VALorizzazione della ricerca universitaria), e il secondo da "The ProTon Europe Annual Survey Report (Fiscal Year 2009): Innovation from Public Research" chiariscono bene cosa intendo.

Quindi, con l'augurio che nei prossimi anni la nostra Ricerca possa ottenere risultati finanziari sempre migliori (e che una "nanoparticella" sia dovuta anche all'attività di ITER e di nanoforum) auguro a Lei, gentile Partecipante,

Buon lavoro a nanoforum 2011

the research evaluation parameters not only number of publications and "indexes" (H-index, H-IF, ...), but also the economic results generated by new technologies, results that should be compared with those achieved by other European countries. The two graphs will help to explain what I mean: the first one comes from the "VIII Report 2011 by Netval" (NETwork for the VALorisation of university research); while the second one comes from "The ProTon Europe Annual Survey Report (Fiscal Year 2009): Innovation from Public Research". Finally, wishing always improved economic performances of our national research in the coming years (and wishing that a "nanoparticle" of these positive results will be due to the work of ITER and nanoforum), I am glad to wish you, dear Participant, good job at nanoforum 2011.



Domenico Piazza
Senior Partner, ITER

HONOUR COMMITTEE

The Honour Committee points out topics of great interest for the civil society and the industry, and sensitizes public awareness of nanotechnologies. It involves Institutions, Organizations, Companies and Associations, in order that the technological revolution, that the application of these technologies implies, is understood, spread and used in a safe way.



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*Ministry of
Economic Development*



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POLVERINI**
*President,
Regione Lazio*



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FRATI**
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of Rome, Host University*



**GIOVANNI
AZZONE**
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**LUCIANO
MAIANI**
*President, National Research
Centre - CNR*



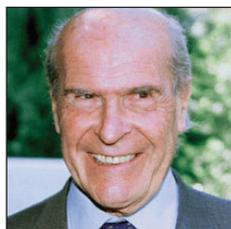
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Polytechnic of Turin*



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*President,
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AMBASSADOR
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*Italian Institute for Foreign
Trade - ICE*



UMBERTO VERONESI
*Scientific Director, European
Institute of Oncology - IEO*

PROMOTING COMMITTEE

The Promoting Committee, on the basis of its own experiences and the preeminent indications, contributes to the realization of the different conference sessions and promotes the event for an important dissemination of knowledge and for an active involvement of Companies.

It takes part to the realization of the Guide-Catalogue (available only during the event) including the best overview of nanoforum. The Guide-Catalogue offers a series of information, useful all over the year.



MARCO ROSSI
Sapienza University of Rome
Coordinator of the Promoting Committee



CARLO ENRICO BOTTANI
Polytechnic of Milan



ALBERTO CIGADA
Polytechnic of Milan



MASSIMO DE VITTORIO
National Nanotechnology Laboratory NNL/CNR



DOMENICO PIAZZA
ITER



FABRIZIO PIRRI
Polytechnic of Turin



ALESSANDRO SCIOLARI
Assoknowledge – Italian Technological Platform for Nanotechnologies



LIVIO VANINETTI
Director Italy Frost & Sullivan



AN ANCIENT TALE:

AN ANCIENT TALE CONNECTS THE NAME OF EUDOSSIA AND SAN PIETRO IN VINCOLI: THE EMPRESS EUDOSSIA, WIFE OF TEODOSIO II (408-550), EMPEROR OF THE EAST, SENT FROM COSTANTINOPLES TO HIS DAUGHTER EUDOSSIA "MINORE" PART OF THE CHAINS ("VINCOLI") OF SAN PETER WHICH SHE FOUND AT JERUSALEM. THESE CHAINS WERE DONATED TO THE POPE LEONE MAGNO WHICH PUT THEM NEAR THE ONES THAT HOLD SAN PETER DURING HIS ROMAN CAPTIVITY, AND THE MIRACLE HAPPENED: THE TWO CHAINS MELTED TOGETHER FORMING A UNIQUE ONE.

SAPIENZA UNIVERSITY OF ROME

Sapienza was founded in 1303 by Pope Boniface VIII, it is the first University in Rome and the largest University in Europe: a city within a city, with over 700 years of history, 145,000 students, over 4,500 professors and almost 5,000 people are administrative and technical staff. Sapienza has a wide academic offer which includes over 300 degree programmes and 250 one or two year professional courses. Sapienza has 116 libraries and 21 museums as well as efficient student services such as Ciao (Information, welcoming and counselling centre), SoRT (Counselling and tutorship services) and assistance for disabled students. Concerning with students' origin, over 30,000 of them come from all parts of Italy; over 7,000 people come from abroad. Incoming and outgoing Erasmus students are about 1,000 people per year. Sapienza is implementing ICT services for students, such as online enrolment, University e-mail address and wireless hotspots around Campus. Sapienza plans and carries out important scientific investigations in almost all disciplines, achieving high-standard results both on a national and on an international level, thanks of the work of its faculties, departments and centres devoted to scientific research. There are also more than 150 PhD programmes which include almost all major fields of knowledge. The first University in Rome is proud to have had many famous scholars among his students. Dealing with the field of Physics' students, members of the so called 'Via Panisperna' group – including the scientists Enrico Fermi, Edoardo Amaldi and Emilio Segrè – gave a crucial contribute to Physics and left an important heritage in subjects like Quantum Physics, Physics of Disordered Systems and Astrophysics. Sapienza enhances research by offering opportunities also to international human resources. Thanks to a special programme for visiting professors, many foreign researchers and professors periodically come to Sapienza, consolidating the quality of its education and research programmes. Sapienza University of Rome is a public, autonomous and free university, involved in the development of society through research, higher level of education and international cooperation.

Faculty of Civil and Industrial Engineering

The Faculty was founded in 1817 by Pope Pius VII, following the model of the most famous Parisian and Viennese School of Engineering of the time; in 1935, due to the Gentile's reform, the School became the Faculty of Engineering. The Faculty was founded with the aim of training professionals of high cultural background, qualified to meet the real needs of training and research company, possessing the ability to promote and to develop technological innovation processes in different cultural environments. The ancient Faculty of Engineering has a long educational tradition which is appreciated all over the world. This rich experience has allowed the Faculty to offer a very innovative syllabus today, including also a specific program on Nanotechnology Engineering. It aims particularly at satisfying local engineering needs, yet also to prepare graduates for employment in an increasingly globalised and international job market. Recently, a more general internal reorganization of Sapienza required a thematic splitting of the research and teaching activity, with the consequent born of the new Faculty of Civil and Industrial Engineering, the headquarter of which remained in the pristine site, and of the new Faculty of Information Engineering, Informatics and Statistics.

The Faculty of Civil and Industrial Engineering is spread among various buildings in the area of via Eudossiana, the most representative is the old monastery of the church of San Pietro in Vincoli (San Peter in Chains), also known as basilica Eudossiana, but educational and scientific activities are also held in other locations in Rome and Lazio, like Latin and Rieti.



Fabrizio Vestroni
*Dean of Faculty of Civil and
 Industrial Engineering
 Sapienza University of Rome*

NANOFORUM HAS REACHED ITS SEVENTH EDITION

We are proud to host the meeting for the first time in the Renaissance Cloister of the San Pietro in Vincoli. The Cloister was built between 1493 and 1503, attributed to Giuliano da Sangallo, and now is fully incorporated in the early twentieth century buildings housing the Faculty of Civil and Industrial Engineering, Sapienza University of Rome. Since the first edition in 2005, Nanoforum is a reference event for the promotion of the new possibilities offered by nanotechnologies and for fostering the process of technological transfer from the academic world to industry. The location in Sapienza and in Lazio is supported by many different and synergic reasons. Strategically located at the very heart of the Mediterranean-trade corridor, Lazio Region managed to blend its great historical past with a modern entrepreneurial mentality. Its actual socioeconomic success is based on knowledge and innovation, on the relationship between businesses and universities, and on the professionalism of its workforce and innovative skills. Nowadays, Lazio has become one of Italy's driving forces due to its industrial districts. The Lazio Region offers among the broadest range of university education in Italy (16 higher-learning institutions throughout the region), also thanks to its network of public and private universities. Lazio boasts the national supremacy in public expenditure for "research and development" (1.8% of its GDP compared to 1.1% in Italy), in workforce employed in hi-tech sectors (6 out of 1,000 inhabitants) and in "techno-product" exports (60% of total exports compared to 26% in Italy). It is the first Italian region in research structures with 25 CNR centres (19 territorial units and 2 separate complexes), 3 scientific and technology parks (Palmer, STP of Northern Lazio and "San Raffaele" Biomedical Scientific Park), headquarters of ASI, ENEA, ESA-ESRIN and INFN and a strong concentration of companies active in knowledge economy (2.34 units out of 1,000 inhabitants). The Lazio Region ranks second in Italy for contribution to the national GDP, third for population and eighth in terms of overall surface area. With the highest concentration of public and private universities and research centres in Italy, the Lazio Region represents a big, dynamic and innovation-oriented market. Over 600 multinationals are currently based in Lazio, attracted by a highly specialized workforce, the proximity to relevant markets (Central Europe and the Mediterranean area) and one of Italy's most developed logistic systems. In such a context, two recent initiatives in Sapienza are worth noticing:

- I) The realization of the SNN-Lab (Sapienza Nanotechnology and Nanoscience Lab), an advanced nanotech infrastructure promoted, realized and managed by CNIS (Center for Nanotechnology Applied to the Engineering Sapienza);
- II) Starting from academic year 2008-09, the Faculty of Engineering is offering the first, and up to now, unique Master level course in Nanotechnology Engineering nationwide. Teaching involves professors doing research work in nanotechnology from a number of departments of Sapienza University.

For many years, nanotechnology has remained shrouded, its benefits being unknown to the society. However, today nanotechnology is fast becoming a necessity in all spheres of modern life. The impact of this cutting-edge technology has become so much more evident. All the more recent progress in technology, in the science of life, health, environment, agriculture, power, construction and so forth, have in common the study and comprehension of physical and biophysical phenomena at the smallest scale with the consequent capability to generate new solutions based on atomic- and molecular-scale manipulations. Nanotechnology can be considered a multi-disciplinary engineering field, which simultaneously draws from and benefits areas such as materials science and engineering, electronics, mechanics, chemistry, physics, and biology. The purpose of research projects outcomes is to create an opportunity for a company, such as guidance for the direction of technology development. Nevertheless, from a business standpoint, the research outcomes are of only incidental importance. How new knowledge from a collaboration research with the university can contribute to a company's performance, this is the major impact on a company's competitiveness and productivity. The expected goal of Nanoforum is then to reduce the gap between outcome and impact by establishing a strong and effective communication framework in which Industries, Universities and Research Labs can work together to create, support, and sustain an environment to facilitate, in particular, advanced researches in nanotechnology and, more in general, to provide input and boost to science-based innovation processes.

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**FILAS
FINANZIARIA LAZIALE
DI SVILUPPO**

Filas S.p.A. is Regione Lazio's agency dedicated to supporting entrepreneurs in the processes of development and innovation in the area of Rome and the Lazio region. It helps and finances enterprises, institutes and research centres which invest locally on innovative projects in the following sectors: Aerospace, Biosciences, Technologies applied to Cultural Heritage, ICT, multimedia, sustainable technologies and renewable energy, cinema and audiovisuals and Third sector. Filas is also the managing body of Lazio's three Technological Districts: Aerospace (DTA), Biosciences (DTB) and Technologies applied to Cultural Heritage (DTC).

On the occasion of nanoforum 2011, which will be focussing on nanotechnologies, Filas showcases its activities in the Aerospace and Biosciences Technological Districts, established respectively in 2004 and 2008 through Framework Agreements underwritten by Regione Lazio, the Ministry of Economic Development (MiSE) and the Ministry of Education, University and Research (MIUR).

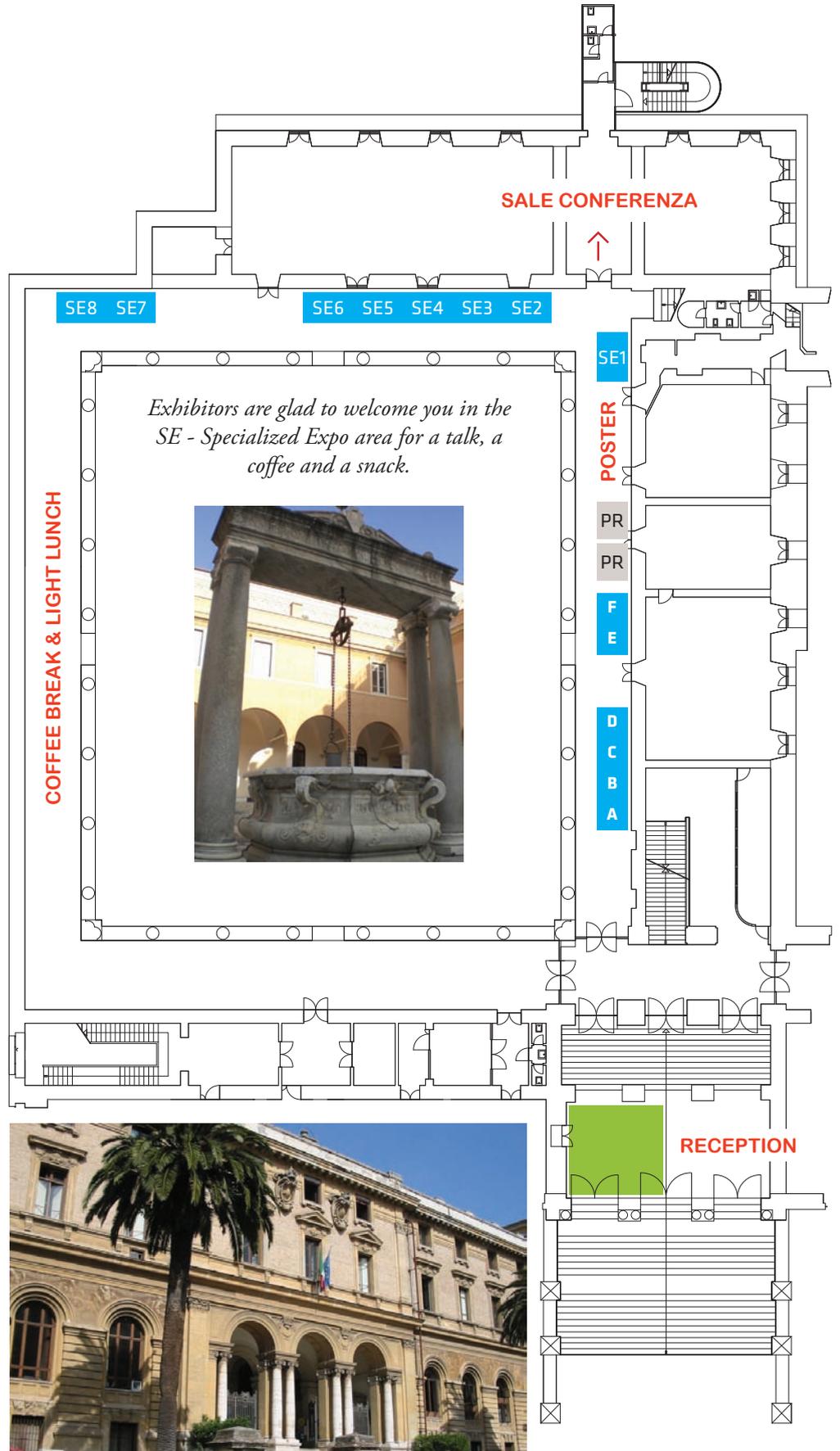
The two Technological District's major objectives are: setting-up structured networks of technical and scientific relationships and collaborations between public sector and private enterprise researchers; improve applied and industrial research's capacity to design, operate and prototype; facilitate investments in technological and technical-scientific infrastructures; promote and support the new generation of high tech enterprises; strengthen and develop the visibility of the aerospace and biosciences sectors in the international field; encourage the growth of professional figures through training.

DTA's major areas of operation relate to space applications, principally: satellite navigation, earth observation and telecommunications. The DTA provides, through its LazioConnect platform, a collaborative environment in which the players of Lazio's industrial system can build-up critical mass, technological competitiveness and contracting power on the open market.

DTB's major sectors of involvement are: Farmaceutical, Medical Devices, Biotechnologies, Nanosciences and health related nanotechnologies, health related food and agriculture, and finally ICT applied to biomedicine and health services.

DTA and DTB operate in support of Small and Medium Enterprises (SMEs), Large Enterprises and Research Bodies through: calls for projects or proposals and actions supporting industrial and experimental research projects; technological transfer in favour of SMEs; participations in existing or new enterprises; applied and industrial research; high education and professional training; backing the creation of NewCos and spin-offs.

MEETING
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EXHIBITOR'S LIST

Alphabetical order

F	AGILENT TECHNOLOGIES - VACUUM PRODUCTS DIVISION
SE5	CHEMSAFE CONSULTING
A	COMSOL
SE6	DEA MEDIAGROUP
SE7	ENEA
C	FLAMAR
SE2	FROST & SULLIVAN
D	HORIBA SCIENTIFIC
PR	ICT4Executive
SE6	IEEE
PR	Iged.it
PR	INSTITUTE OF NANOTECHNOLOGY
OR	ITER
SE8	LOVALITE
SE1	NANO futures
B	NANOSURFACES
B	NEXTMATERIALS
SE3	POLITECNICO DI TORINO
C	PRA.MA
PR	PROMEDIA PUBLISHING
E	TIBERLAB
SE4	UNIVERSITA' SAPIENZA DI ROMA DIPARTIMENTO DI INGEGNERIA CHIMICA MATERIALI AMBIENTE
PR	WIRELESS4INNOVATION

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A	COMSOL
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B	NEXTMATERIALS
C	FLAMAR
C	PRA-MA
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SE5	CHEMSAFE CONSULTING
SE6	DEA MEDIAGROUP
SE6	IEEE
SE7	ENEA
SE8	LOVALITE

OR: ORGANIZATION

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SE: SPECIALIZED EXPO

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- Carl Zeiss SMT, global leader in light, electron and ion-optical technologies for industry and R&D, has designated Agilent Technologies as a Carl Zeiss SMT Supply Chain Partner.

CHEMSAFE was founded in 2001 by Dr. Antonio Conto and nowadays is one of the best independent consultancy companies in Europe for registration of Agrochemicals, Biocides, Chemicals (as for REACH regulation), Petrochemicals and Pharmaceutical products. Based on an excellent expertise and scientific background, CHEMSAFE manages all projects on quality, reliability and competitive price approach under an expert Project Leader. Our multidisciplinary team includes the highest level of knowledge about legal, chemistry, biology, toxicology, environmental fate, eco-toxicology, regulatory and scientific networks. CHEMSAFE offers you, besides of all regulatory needs, Consortium Management, Only Representatives (OR), Third Parties Representatives (TPR) and full REACH Dossiers for chemical and petrochemicals products. We are now getting more specialized in the safety of nanomaterials particularly in the view of their peculiar safety profile. Special registration technical dossier (IUCLID 5) is requested to submit the hazard assessment of nanochemicals.

La società CHEMSAFE è stata fondata dal Dr. Antonio Conto nel 2001 e si pone ora come una società indipendente di consulenza leader per la registrazione di prodotti fitofarmaci, biocidi, sostanze chimiche secondo il regolamento REACH così come prodotti petrolchimici e farmaceutici. Sulla base di una notevole esperienza regolatoria e background scientifico, CHEMSAFE può gestire l'intero progetto di registrazione sulla base di criteri di qualità ed affidabilità associati a prezzi competitivi nell'ambito dell'area europea di riferimento. Il nostro team multidisciplinare include esperti legali, chimici, chimici industriali, biologi, tossicologi, eco tossicologici e persone specializzate nel campo regolatorio oltre che un network europeo di laboratori e di consulenti specializzati. Oltre al supporto tecnico la nostra attività è rivolta altresì alle attività gestionali quali: gestione di consorzi REACH, Rappresentante Unico (OR) per società non europee, Rappresentante Terzo (TPR). Ultimamente abbiamo deciso di specializzarci nella sicurezza dei nano materiali proprio in virtù della peculiarità del loro profilo di sicurezza e delle particolari richieste per la descrizione del loro pericolo da indicare nel dossier tecnico di registrazione (IUCLID 5).

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COMSOL provides software solutions for multiphysics modeling. We are a fast growing high tech engineering software company with a proven track record and a vision as a future leader of the industry. Our customers are researchers and engineers working for leading companies, research labs, and universities. Our flagship product COMSOL Multiphysics is widely used in the fields of nanotechnology, microfluidics, and MEMS. Innovative products need revolutionary software tools to support them! Full details about COMSOL Multiphysics and related products are available at www.it.comsol.com.

COMSOL è la casa produttrice del software di modellazione e simulazione multifisica per eccellenza. La nostra è una società high tech in costante crescita con un curriculum di successo e la vision di essere i prossimi leader nel settore. I nostri clienti sono ricercatori e ingegneri delle maggiori società, laboratori di ricerca e università. Tra gli ambiti nei quali il nostro prodotto di punta COMSOL Multiphysics è maggiormente utilizzato annoveriamo le nanotecnologie, la microfluidica e i MEMS. Prodotti innovativi necessitano di strumenti software che li supportino pienamente! Maggiori dettagli su COMSOL Multiphysics e relativi prodotti su www.it.comsol.com.

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DEA Mediagroup è l'unico rappresentante autorizzato in Italia delle pubblicazioni della IEEE. Suo principale compito è la diffusione della letteratura scientifica online della IEEE in tutto il mondo della ricerca accademica e industriale italiana.

ENEA

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ENEA is the name for the Italian National Agency for New Technologies, Energy and Sustainable Economic Development. Pursuant to art. 37 of Law no. 99 of July 23rd, 2009, the Agency's activities are targeted to research, innovation technology and advanced services in the fields of energy.

The Agency's main research issues are as follows: ENERGY (Nuclear Fusion, Nuclear Fission, Renewable Energy Sources and Advanced Technologies for Energy and Industry); SUSTAINABLE ECONOMIC DEVELOPMENT (Environmental Characterization, Prevention and Recovery, Environmental Technologies, Seismic Protection, Radiation Biology and Human Health and Sustainable Development and Innovation of the Agro-Industrial System); NEW TECHNOLOGIES (Radiation Applications, Materials Technologies, Energy and Environment Modeling and ICT).

The nine ENEA Research Centres and five Research Laboratories - located all over Italy - are endowed with a wide range of expertise, advanced facilities and instruments put at the disposal of both ENEA's research programmes and of the Nation's scientific and productive world.

ENEA also operates through:

- a network of territorial offices providing information and consultancy services for local public administrations and enterprises
- an ENEA-EU Liaison Office in Brussels with the purpose of promoting and strengthening the image and participation of ENEA within the EU framework.

Within its fields of expertise ENEA develops and puts specific analysis and assessment instruments at the disposal and in support of public and private operators working in the fields of energy, the environment and innovation. ENEA provides also agency services in support to public administrations, public and private enterprises, and citizens. ENEA carries out technology transfer aiming at increasing the Italian economic system's competitiveness with a view to sustainable development.

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FLAMAR has born after 20 years of its owner Claudio Bellotti in sales of scientific instruments and it has a large range of products in the nano and micro positioning:

- Nanopositioning systems Mad City Labs (www.madcitylabs.com)
- Motorized translation and rotation stages Feinmess (www.feinmess.de)
- Optical tables and workstation Kinetic System (www.kineticsystems.com)
- Mirror mount and optomechanic Fine Adjustment (www.fine-adjustment.com)
- High vacuum components UHV Design (www.uhvdesign.com)

Together with the partner company PRA.MA, FLAMAR offers nanoindenter from CSM (www.csm-instruments.com) and atomic force microscopy NT-MDT (www.ntmdt.com).

FLAMAR di Claudio Bellotti, nasce dall'esperienza ventennale del titolare nella vendita di strumentazione per i laboratori di ricerca e ha un' ampia gamma di prodotti destinati alla misura, al controllo, al posizionamento ed all' assemblaggio di alta precisione:

- Sistemi di nanoposizionamento piezo Mad City Labs (www.madcitylabs.com)
- Sistemi motorizzati di posizionamento micrometrico Feinmess (www.feinmess.de)
- Banchi antivibranti e workstation Kinetic System (www.kineticsystems.com)
- Montaggi ottici ed optomeccanica Fine Adjustment (www.fine-adjustment.com)
- Componentistica per vuoto UHV Design (www.uhvdesign.com)

In collaborazione con la ditta partner PRA.MA, FLAMAR offre nanoindentatori CSM (www.csm-instruments.com) e microscopi forza atomica NT-MDT (www.ntmdt.com)

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Frost & Sullivan, the Growth Partnership Company, enables clients to accelerate growth and achieve best-in-class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's Growth Team with disciplined research and best-practice models to drive the generation, evaluation, and implementation of powerful growth strategies. Frost & Sullivan leverages 50 years of experience in partnering with Global 1000 companies, emerging businesses and the investment community from more than 40 offices on six continents.

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HORIBA Scientific is the new global team created to better meet customers' present and future needs by integrating the scientific market expertise and resources of HORIBA.

HORIBA Scientific offerings encompass elemental analysis, fluorescence, forensics, GDS, ICP, particle characterization, Raman, spectral ellipsometry, sulfur-in-oil, water quality, and XRF.

Prominent absorbed brands include Jobin Yvon, Glen Spectra, IBH, SPEX, Instruments S.A, ISA, Dilor, Sofie, SLM, and Beta Scientific. By combining the strengths of the research, development, applications, sales, service and support organizations of all, HORIBA Scientific offers researchers the best products and solutions while expanding our superior service and support with a truly global network.

HORIBA Scientific è uno dei maggiori produttori mondiali di sistemi e componenti avanzati e innovativi per l'analisi elementare e molecolare dedicati alla ricerca e l'industria e leader nel settore della spettroscopia Raman confocale.

La società opera con un team a livello mondiale che integra le competenze scientifiche e le risorse del gruppo HORIBA creato per soddisfare al meglio le esigenze dei clienti.

In HORIBA Scientific sono confluiti noti marchi come Jobin Yvon, Glen Spectra, IBH, Spex, Dilor, Sofie. Combinando i punti di forza di ciascuno di essi nei settori chiave quali la ricerca e sviluppo, lo studio di nuove applicazioni, e la rete di assistenza, HORIBA Scientific si impegna ad offrire le migliori soluzioni strumentali che comprendono sistemi per la spettroscopia Raman e di Fluorescenza per l'analisi molecolare, l'analisi elementare ICP ed in Fluorescenza di Raggi X, l'ellissometria spettroscopica e la GDS per lo studio di film sottili, la caratterizzazione delle particelle, l'analisi dello zolfo negli oli, e sistemi per il controllo della qualità dell'acqua.

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ICT4Executive è un progetto culturale assolutamente unico in Italia, che si propone l'ambizioso obiettivo di avvicinare e appassionare gli Executive di Business ai temi tecnologici, che rivestono un ruolo sempre più rilevante nella definizione delle strategie aziendali.

L'iniziativa si concretizza in un periodico bimestrale cartaceo (ICT4Executive) e in una serie di Newsletter verticali (ICT4eInvoice, ICT4Enterprise2.0, ICT4Health, ICT4SupplyChain, ICT4PMI, ICT4Executive), focalizzate sull'impiego business-oriented dell'Information and Communication Technology.

Il format e i contenuti editoriali di ICT4Executive sono progettati specificatamente per rispondere, nel contesto macroeconomico attuale, alle esigenze di aggiornamento del parterre di lettori cui si indirizza, costituito dal top management delle più importanti aziende italiane: Amministratori Delegati, Direttori Generali, CIO e gli altri C-Level.

Bridging the gap between ICT & Business è, in sintesi, la mission del progetto.

The IEEE is the world's largest technical professional society.

Through its more than 375,000 members in 160 countries, the organization is a leading authority on a wide variety of areas ranging from aerospace systems, computers and telecommunications to biomedical engineering, electric power and consumer electronics.

Dedicated to the advancement of technology, the IEEE publishes 30 percent of the world's literature in the electrical and electronics engineering and computer science fields, and has developed over 1,800 active industry standards.

IEEE Xplore delivers access to nearly 3 million full-text articles from highly-cited journals, magazines, and conference proceedings published as far back as 1913, and recently introduced over 400 eBooks spanning numerous content areas and eLearning library courses.

The organization also sponsors or co-sponsors over 800 technical conferences each. Additional information is available online at www.ieee.org.

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Nato nel 1992, iged.it è il trimestrale interamente dedicato alla gestione elettronica dei documenti e delle informazioni aziendali.

Una pubblicazione autorevole, sempre aggiornata e obiettiva che offre notizie, riflessioni, interviste e approfondimenti e ospita i contributi dei protagonisti del settore e delle principali autorità in materia. Perché la digitalizzazione non è solo questione di computer. È questione di persone.

Sul sito www.iged.it è possibile leggere il sommario dell'ultimo numero, quello dei numeri precedenti, il piano editoriale e numerose altre informazioni quali la tipologia dei lettori, ecc. La redazione è pronta a studiare soluzioni editoriali personalizzate per l'esigenza del committente.

Al medesimo link è possibile anche consultare igedonline, la newsletter che riporta molte utili informazioni inerenti il mondo del documento digitale.

Entrambi i periodici sono un ottimo veicolo per l'aggiornamento degli utenti e la promozione delle soluzioni degli operatori.

The Institute of Nanotechnology was one of the world's first nanotechnology information providers, and is now a global leader. Its main objectives are to raise the awareness of industry and the public to this new area of technology. The Institute is now the most influential nanotechnology organization in Europe and leads the European network of networks, Nanoforum as well as working closely with governments, universities, researchers and companies worldwide on micro and nanotechnology. It also advises industry and government on nanotechnology and its applications. IoN is also responsible for a number of nano-related websites which cater for different audiences, e.g. www.nanoforum.org (for general information); www.nanomicroclub.com (a website for new nano and micro start-ups); and www.euronanotrade.com (the European Nanotechnology Trade Association website) and www.nanomednet.org (information on nanomedicine). IoN nano-news now reaches more than 47,000 nanotechnologists. It also serves as a key organizer of international scientific events, conferences, and educational courses designed to encourage nanotechnology take-up by industry, as well as stimulating interest in less developed countries.

L'Istituto di Nanotecnologia è stato uno dei primi a divulgare notizie sulle nanotecnologie, ed è oggi uno dei leader di settore a livello globale. I suoi obiettivi sono quelli di accrescere l'attenzione e il coinvolgimento dell'industria e del pubblico nei confronti di questa nuova area tecnologica. L'Istituto è oggi la più influente organizzazione di nanotecnologie in Europa e dirige il network dei network europei, Nanoforum, nello stesso tempo collabora attivamente con governi, università, ricercatori e aziende nel mondo sulle micro e nanotecnologie. L'organizzazione informa inoltre l'industria e i governi sulle nanotecnologie e le sue possibili applicazioni. IoN è anche responsabile di una serie di siti web dedicati alle nanotecnologie che si rivolgono a differenti audience, per esempio www.nanoforum.org (informazioni generali); www.nanomicroclub.com (dedicato alle nuove micro e nano start-up); www.euronanotrade.com (il sito dell'Associazione Industriale Nanotecnologie europea) e www.nanomednet.org (informazioni sulla nanomedicina). IoN nano-news raggiunge più di 47.000 nanotecnologi. Funge da organizzatore chiave nella realizzazione di eventi scientifici internazionali, convegni e corsi di formazione nati per incoraggiare la fattibilità produttiva delle nanotecnologie nell'industria, così come la promozione delle stesse nei paesi meno sviluppati.

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Acronym of Innovation: Technologies, Experience and Research, since 1989 ITER is the Business to Business atelier, capable of tailoring bespoke services for the scientific and business world.

ITER organizes successful Seminars, Congresses and Exhibitions on innovative topics, such as:

- biotechnologies
- nanotechnologies
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In addition, ITER takes care of editing specialized printed material concerning the ICT world dedicated to the professional field, and therefore ITER can produce publishing services by writing and printing specialized contents: research, handbooks, books and brochures, even if in limited edition. Since the beginning the philosophy of ITER has been dedicated to flexibility, always offering rapid and, above all, effective solutions for any needs.

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LovaLite, the next generation of micro-optical components

LovaLite provides you expert supporting services and best micro-optical components for your advanced applications in micro-optics and nanotechnologies. LovaLite is based in France and delivers worldwide directly and through a network of qualified distributors.

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Our custom realizations fulfill specific needs in demanding environment such as magnetic fields, liquid cells, thermal analysis, force spectroscopy, etc. We also supply best in class optical design software and support services to help you develop the next generation micro/nano scale photonic technologies.

LovaLite provides expert custom services from design to production in all area related to optical fibers, nano-optics, sub-wavelength light manipulation.

NANOFUTURES

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NANOfutures is the cross-European Technology Platforms initiative that brings together all relevant stakeholder groupings involved in nanotechnology.

The Platform is supported by a FP7 funded project, called NANOfutures Coordination Action.

NANOfutures aims

- (1) to identify and optimize synergies between European and National Platforms, research programmes and other research projects and initiatives related to nanotechnology, in order to reduce the fragmentation of the European nanotechnology and coordinate future strategies;
- (2) to identify key strategic nanotechnology nodes addressing issues of cross-sectorial and nano-specific relevance for the innovation and rapid uptake of nanotechnologies in order to increase EU competitiveness;
- (3) to construct and disseminate an integrated Industrial and Research Roadmap for European Nanotechnology.

At national and regional level, several mirror platforms are supporting the initiative by contributing to NANOfutures roadmapping activity. The Italian Nanotechnology Platform has been launched in 2010 around the main Italian industrial companies, universities and research centres of the nanotech sector, with the objective of creating the critical mass and synergies between industry and academia to launch and rationalise research projects and technology transfer initiatives on topics of national interest and establish a leadership position of Italy on such topics.

NanoSurfaces, spin-off of Politecnico di Milano, was created for providing surface treatments and finishing of titanium, tantalum and other high technology alloys for biomedical devices and high technological applications. NanoSurfaces offers titanium and its alloys surface treatments for improving metal osteointegration, anti-bacterial properties, anti-fretting and anti-galling feature. Furthermore, NanoSurfaces owns exclusive know-how for high quality titanium coloring. NanoSurfaces provides surface treatments for: Biomedical applications: dental and orthopedic prosthesis where osteointegration, anti-bacterial properties and low fretting corrosion are requested features; Mechanical applications: surface treatments for anti-galling, high wear resistance and low fretting corrosion application in aerospace, naval and mechanical fields; Design and architecture applications: high quality coloring for inside and outside panels and valuables, and anti-pollution and anti-smoke surface treatments.

NanoSurfaces boasts exclusive ownership of the following trademarks: BioRough™, BioSpark™, TiCare™, TiHard™ and TiColor™.

Nanosurfaces, spin-off del Politecnico di Milano, nasce per sviluppare tecnologie sui rivestimenti sul titanio e le sue leghe, in ambito biomedicale e non. Grazie alla tecnologia sviluppata nell'Ateneo milanese, Nanosurfaces può fornire tecniche di coating prive di riporto di materiale, sia per finalità osteointegrative, antibatteriche, antiusura-antifretting ed autolubrificanti, sia con finalità di colorazione. I settori di interesse sono: biomedicale: dentale, ortopedico e nelle applicazioni dove sono richiesti rivestimenti biomimetici, antibatterici ed antifretting; meccanico: aeronautico, nautico e meccanica avanzata, se necessari rivestimenti autolubrificanti, antiusura-antifretting; edilizia, arredamento ed oggettistica, per colorazioni speciali su pannellature di titanio per rivestimenti di esterni ed interni, con la possibilità anche di sviluppare caratteristiche antinquinamento ed antifumo, ed oggettistica in titanio.

Maggiori informazioni su Biorough™, Biospark™, TiCare™, TiHard™ e TiColor™, visitando www.nanosurfaces.it

NEXTMATERIALS

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NextMaterials' main business activity is the development of new technologies and the pre-industrialization of academic patents as, for example, the antibacterial treatment (applicable to recirculation-air systems) and the development of thermal maintaining materials (used for smart packaging).

NextMaterials ha come principale attività aziendale lo sviluppo di nuove tecnologie e la preindustrializzazione di brevetti accademici come, ad esempio, il trattamento antibatterico (applicabile a sistemi a ricircolo di aria) o lo sviluppo di materiali a mantenimento termico (per il packaging intelligente).

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Politecnico di Torino is one of the most prestigious institutions in Europe and the first ranked Italian University in 2011. Laboratories and Technology Transfer Centres are active in all the fields of engineering, architecture and industrial design. Nanotechnology/nanoscience is one of the strategic fields. An International Master of Science in Micro and Nanotechnologies for Integrated Systems (www.master-nanotech.com) is present together with a Masters of Science in Material Science and Physical Engineering. The PhD School manages an Excellence Programme (www.sipd.polito.it), where nanotechnologies and nanosciences are an element of prestige.

Research on nanotechnologies are developed in several Departments. Two dedicated Laboratories are present: the Materials and Microsystems Laboratory (CHI-LAB www.polito.it/micronanotech) and the National Excellence Laboratory LATEMAR (www.latemar.polito.it). Since 2010 a new site of CNR Istituto Materiali per l'Elettronica e Magnetismo (IMEM-CNR@PoliTo) has been opened (www.imem.cnr.it). 2009 Politecnico entered in the Italian Institute of Technology research network with the creation of the Center for Space Human Robotics (<http://shr.iit.it>).

Politecnico has a strong tradition of research in collaboration with the industries. Nanotechnologies and nanostructured materials are surely the most promising drivers of innovation and will play a master role in increasing the competitiveness of the national industry (www.research.business.polito.it/turin; www.polito.it/imprese/index.en.html).

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PRA.MA has been open in 1994 by dr. Mario Da Prada, after 20 years of experience in sales for scientific instrumentation. PRA.MA is exclusive distributor in Italy for these companies:

CSM Instruments (www.csm-instruments.com), leader in Surface Mechanical Characterization, Indentation Tester, Scratch Tester and Tribometer.

NT-MDT (www.ntmdt.com): NT-MDT offers a complete range of SPM, including AFM, STM, SNOM for all industrial and scientific applications.

SPECS (www.specs.de): SPECS leads the way in state-of-the-art technology, cutting-edge components and individually designed complex systems for surface analysis in UHV. It offers a variety of sources for deposition, excitation and charge neutralization as well as analyzers, monochromators and research microscopes like LEEM and STM.

In cooperation with the company FLAMAR (www.flamarweb.it), PRA.MA offers high precision positioning systems from Mad City Labs (www.madcitylabs.com) and Feinmess (www.feinmess.de) and components for high vacuum from UHV Design (www.uhvdesign.com).

Dall'esperienza ventennale del dr. Mario Da Prada nel campo della vendita di strumentazione scientifica, nel 1994 nasce la ditta PRA.MA (www.pra-ma.com), specializzata nell'analisi delle superfici e dei film superficiali.

PRA.MA rappresenta in Italia ditte leader mondiali nel settore dell'analisi di superfici: CSM Instruments (www.csm-instruments.com), azienda leader nel settore della nano e micro indentazione. CSM produce anche Scratch Tester, per la misura d'adesione dei rivestimenti alle superfici e Tribometri per la misura del coefficiente d'attrito e dell'usura. NT-MDT (www.ntmdt.com), che offre un'intera linea di SPM (Scanning Probe Microscope) comprendente AFM, STM, SNOM, praticamente per tutte le applicazioni industriali e scientifiche.

SPECS (www.specs.de), che è specializzata nello sviluppo e nella produzione di sistemi personalizzati UHV per l'analisi di superfici. Offre soluzioni complete come beamline di sincrotroni con stazione finale.

In collaborazione con la ditta partner FLAMAR (www.flamarweb.it), PRA.MA offre anche sistemi di posizionamento con precisione nanometrica e micrometrica della Mad City Labs (www.madcitylabs.com) e della Feinmess (www.feinmess.de) e componentistica per il vuoto della UHV Design (www.uhvdesign.com).

Promedia Publishing is a specialized editor in technical issues. It publishes 3 magazines in two languages (italian/english) dedicated to food & beverages techniques, as Food Machines, Beverage Machines and Rivista del Latte), the Enorama yearbook, a real 'vademecum' about the bottling industry. In 2004 Promedia became the new editor of 'La Chimica & l'Industria', historical magazine of applied chemistry world and official houseorgan of Società Chimica Italiana. In 2007, Promedia publish LAB, a monthly issue dedicated to all laboratory equipments and methods for analysis applied in various sectors. The presence at most important exhibitions all over the world, the propose of great contents and graphic effect's magazines, the editing of special edition focused on companies with great care, make of Promedia Publishing an appreciated and innovative editorial reality in the economy and industry world.

Promedia Publishing è una casa editrice specializzata in pubblicazioni tecniche. Edita tre testate bilingue (italiano/inglese) dedicate al settore delle tecnologie alimentari (Food Machines, Beverage Machines, la Rivista del Latte), l'annuario Enorama, 'bibbia' dell'industria dell'imbottigliamento. Nel 2004 diventa il nuovo editore de 'La Chimica e l'industria', testata storica nel mondo della chimica applicata e organo ufficiale della Società Chimica Italiana. Nel 2007, si aggiunge alla 'scuderia', LAB, il mensile dedicato al mondo del laboratorio che si pone come ampia vetrina delle più avanzate ed efficaci metodologie e strumentazioni analitiche applicate in diversi settori. La presenza alle fiere più importanti del settore in tutto il mondo, la proposta di magazine di grande spessore tecnico in una veste grafica d'impatto, la pubblicazione di speciali sulle aziende curati nei minimi dettagli (i Focus) fanno di Promedia Publishing una realtà editoriale innovativa e sempre più apprezzata nel mondo dell'industria e dell'economia.

TIBERLAB

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www.tiberlab.com



UNIVERSITÀ SAPIENZA DI ROMA - DICMA

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Tiberlab S.r.l. is a spin-off of University of Rome "Tor Vergata" established in 2008 based on a long-standing experience in device simulations and development of simulating software within the OLAB research group, in the Department of Electronic Engineering. Our mission is to develop innovative software solutions aimed to the design and simulation of electronic and optoelectronic devices, focusing in particular on nanostructured devices. tiberlab offers consulting services and end-user software. Our core product is tiberCAD, a software for CAD applications in the field of electronic and optoelectronic devices. It allows to model and design innovative devices, such as LED diodes based on quantum wells and quantum dots, nanowire FETs, III/V heterostructures, dye-sensitized solar cells (DSC), taking in account the most important physical concepts emerging in the last developments of nanoelectronics and nanotechnology, such as quantum mechanical effects, strain and polarization in heterostructure semiconductor devices, self-heating and thermal transport. tiberCAD is a multiphysics tool, that is it is able to solve many different physical models involved in device simulation. It is also a multiscale tool, since it allows the simultaneous solution of physical models on different length scales. With tiberCAD, quantum and classical descriptions can be used in different regions of a device/nanostructure within the same simulation. Analysis and optimization may be performed at all the relevant length scales, possibly including self-consistent coupling of different models, such as quantum/drift-diffusion, thermal/drift-diffusion. Moreover, tiberlab can offer custom solutions for particular design problems, including the implementation of physical models unavailable in other commercial tools.

Thanks to a strong expertise derived from the connection with OLAB research group in University of Rome Tor Vergata, tiberlab provides novel tools to accomplish the critical requirements imposed by the recent developments in nanotechnologies. tiberlab can be a valuable support to people in academy and industry working on the cutting edge of semiconductor technology, operating in fields such as sensing, energy harvesting, organic and molecular optoelectronics, NEMS and MEMS technologies. The development of new physical models for a wide range of problems allows us to find multidisciplinary solutions which cannot be provided by traditional CAD tools. Our commitment is to assure that our software solutions are always physically grounded and up to date with the last scientific advancements.

The origins of the Department date back to the 1876 when the Application School for Engineers in Roma introduced the course of Chemistry Applied to the Construction Materials and provided it (in 1895) with a suitable building with laboratories, classrooms and other facilities.

In the second half of the last century, the Institutes belonging to La Sapienza and devoted to Chemical Processes and Materials were unified into a single administrative Department.

The Department of Chemical Engineering, Materials and Environment was thus created (1983) including the former Institutes of Applied and Industrial Chemistry, Chemistry for Engineers, Mining Engineering and Metallurgy. The Department is based in four locations: three inside the main Engineering Faculty in Via Eudossiana (S. Pietro in Vincoli) and one in Latina.

The head administrative office is located in Via Eudossiana. The Department is in charge of many teaching courses for all the Engineering Faculty and mainly for Chemical Engineering and for Environmental Engineering and Safety Engineering. It hosts three PhD Courses on Industrial Chemical Processes, Environmental Chemical Engineering, Materials and Row Materials Engineering and two independent Research Centres (CISTeC and C.I.T.C.A.). A Joint Lab of the Sapienza Innovazione Consortium is also part of the Department.

The Department is active in many areas of research and publishes over a thousand papers and patents every year. It is involved in many international collaborations and provides important advice activities to public and private bodies in the fields of energy, environment, materials and chemical processes.

Wireless4innovation

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SOLUZIONI PER L'INNOVAZIONE DEL BUSINESS
WIRELESS
4 INNOVATION



Wireless4innovation, testata della società editoriale Ict & Strategy, è l'unico periodico italiano focalizzato sulle soluzioni a supporto del business basate sulle tecnologie Mobile & Wireless. Il punto di vista della rivista è quello di chi utilizza le ICT e, attraverso di esse, apporta all'organizzazione vantaggi sia concreti sia intangibili, ma non per questo meno significativi. Infatti, già da qualche anno le soluzioni Mobile & Wireless stanno creando molteplici opportunità di innovazione di processo e di business per qualsiasi impresa e pubblica amministrazione.

In questo scenario, Wireless4innovation si pone come strumento di sensibilizzazione e accelerazione del mercato italiano. Ogni numero presenta, infatti, un ampio ventaglio di Business Case italiane e internazionali che spaziano in tutti i settori verticali e che rappresentano "best practice" che aiutano il lettore a orientarsi nel panorama dell'offerta.

Wireless4innovation si pone anche l'obiettivo di orientare il lettore in uno scenario tecnologico in rapida evoluzione, attraverso articoli di approfondimento firmati da docenti ed esperti internazionali che, con un linguaggio chiaro, illustrano lo stato dell'arte e i trend evolutivi delle diverse soluzioni e dei mercati di riferimento.

POSTER



CONFERENCE PLAN

Queste due pagine consentono di vedere "a colpo d'occhio" tutte le iniziative previste come Tutorials, Conferenze, e Eventi satellite. Mostra specializzata, Media Partner e Poster sono nelle pagine precedenti. L'indice è a pag. 4

13TH SEPTEMBER 2011

 14:15 - 15:15

TUTORIAL INTRODUZIONE ALLE NANOTECNOLOGIE

Chairperson: Prof.ssa MARIA CRISTINA CASSANI

 14:45 - 17:15

TUTORIAL NANOTECNOLOGIE: DALLA RICERCA ALL'IMPRESA

Chairperson: Ing. LAURA TASSINARI

 15:30 - 17:30

TUTORIAL NANOTECNOLOGIE: APPLICAZIONI

Chairperson: Ing. FRANCESCO MARINUZZI

14TH SEPTEMBER 2011 - Prima giornata / First day

 09:00 - 10:20

PRESENTAZIONE START UP

Chairperson: Prof. STEFANO FANTONI

 10:20 - 10:35

LE NANOTECNOLOGIE ALLA SAPIENZA

Chairperson: Prof. MARCO ROSSI

 11:00 - 13:00

PLENARY SESSION

Chairperson: Dott. MARIO CERCHIA

 14:00 - 15:45

ENERGY, ENVIRONMENT & NANOSYSTEMS I

Chairperson: Prof. BRUNO SCROSATI

 14:00 - 15:30

SOLGEL FOR TEXTILE

Chairperson: Prof. ALBERTO CIGADA

 16:15 - 18:00

ENERGY, ENVIRONMENT & NANOSYSTEMS II

Chairperson: Prof. GIANFRANCO INNOCENTI

 16:00 - 17:30

NANOTECH FOR CLEANING EXCELLENCE

Chairperson: Prof. ALBERTO CIGADA

CONFERENCE PLAN

*With these two pages you have a "panorama" of Tutorials, Conference sessions, and Satellite Events.
Specialized Expo, Media Partner, Poster are in the previous pages. Index at page 4*

15TH SEPTEMBER 2011 - Seconda giornata / Second day

 09:00 - 10:30

BUILDING & CONSTRUCTION I

Chairperson: Prof. GIANMARIO MARTRA

 09:30 - 11:00

NANOBIOMEDICINE I

Chairperson: Prof. ALBERTO ALBERTINI

 11:00 - 12:30

BUILDING & CONSTRUCTION II

Chairperson: Prof. GIANMARIO MARTRA

 11:30 - 13:00

NANOBIOMEDICINE II

Chairperson: Dott. LEONARDO VINGIANI

 14:00 - 15:30

AEROSPACE & SECURITY I

Chairperson: Ing. GERARDO LANCIA

 14:30 - 16:00

FUNCTIONAL MATERIALS & MEMS I

Chairperson: Dott. CARLO CASARI

 16:00 - 18:00

AEROSPACE & SECURITY II

Chairperson: Ammiraglio LUCIO ACCARDO

 16:30 - 18:00

FUNCTIONAL MATERIALS & MEMS II

Chairperson: Dott. CARLO CASARI
Prof. TEODORO VALENTE

 14:00 - 17:30

SATELLITE EVENT: Primo RepRap Meeting Italiano - Incontro Sulla Stampa 3D

Chairperson: Ing. LEO SORGE

Nelle settimane successive alla manifestazione, solo i Partecipanti potranno accedere alle documentazioni rese disponibili dai Relatori; verrà inviata una mail con la password di accesso.

In the weeks following nanoforum 2011 only registered Participants will be given free access to the documentation made available by the Speakers. An entry password will be sent via email.

13TH SEPTEMBER 2011

CHAIRPERSON



Prof. Ssa
 Maria Cristina Cassani
*Dipartimento di chimica
 fisica ed inorganica,
 Università degli Studi di
 Bologna*

TUTORIAL INTRODUZIONE ALLE NANOTECNOLOGIE

14:15 - 15:15

Negli ultimi anni una piccola parola con un grande potenziale si è insinuata nella nostra vita. Questa parola è "NANO". Il prefisso nano- indica una grandezza matematica pari a 10^{-9} , circa $1/80.000$ del diametro di un capello umano. La dimensione nano viene considerata una dimensione "magica" poiché è il punto di incontro tra le dimensioni degli atomi isolati e dei materiali bulk. Accade quindi spesso che nei materiali nanometrici vengano sconvolte le leggi normalmente valide nella materia macrometrica.

A questa scala le proprietà fisico-chimiche esibite dai materiali possono quindi risultare sorprendentemente diverse da quelle possedute a scala più grande. Le proprietà elettroniche, magnetiche, ottiche, chimiche e termiche dei materiali cambiano nel momento in cui si passa dalla scala macroscopica alla scala atomica o molecolare. Un esempio è fornito dall'oro che, in forma massiva, appare di colore giallo mentre nel momento in cui si sintetizza sotto forma di aggregati di nanoparticelle e viene posto in soluzione, cambia colore a seconda della loro dimensione e forma.

Ma cosa determina il cambiamento di colore nell'oro?

Con il termine NANOTECNOLOGIA si fa riferimento ad un insieme di tecnologie, tecniche e processi che richiedono un approccio multidisciplinare, piuttosto che ad una specifica area scientifica o dell'ingegneria.

I campi di applicazione sono potenzialmente illimitati e tutti i settori produttivi più importanti ne saranno influenzati in maniera significativa. Le nanotecnologie oggi rappresentano un campo in fortissima espansione sul quale stanno lavorando i migliori gruppi di ricercatori di tutto il pianeta. Finanziamenti pubblici e privati per ricerche nell'ambito delle nanotecnologie sono infatti in continua crescita e si prospetta che la loro ricaduta sul mercato mondiale possa portare i prodotti nanostrutturati a raggiungere un giro d'affari stimato intorno ai 600 miliardi di Euro entro il 2015 e alla creazione di oltre due milioni di nuovi posti di lavoro.

Le nanotecnologie rappresentano un salto innovativo radicale che, a detta di molti analisti, produrrà una nuova rivoluzione industriale paragonabile, se non di portata superiore, a quella generata dall'introduzione nel mercato dei semiconduttori nei primi anni '80. Ad oggi sono già stati commercializzati vari prodotti basati sulle nanotecnologie, di cui vedremo qualche esempio e si stima che questi prodotti rappresentino attualmente un mercato di circa 2.5 miliardi di euro.

TUTORIAL
NANOTECNOLOGIE:
DALLA RICERCA ALL'IMPRESA

CHAIRPERSON

Ing. LAURA TASSINARI
Direttore Operativo, FILAS

 **14:45 - 17:15**

14:45 INTRODUZIONE A CURA DEL MODERATORE

15:15 BUSINESS PLAN & VENTURE CAPITAL: QUESTI SCONOSCIUTI

Dott. Matteo Bonfanti
Senior Analyst, Fondamenta SGR

15:45 BUSINESS PLAN & SHORT PRESENTATION: I "KEY FACTORS" PER INIZIARE POSITIVAMENTE

Dott. Tomaso Marzotto Caotorta
Segretario Generale, Associazione IBAN

16:15 PAUSA LAVORI

16:30 ESPERIENZE DI STARTUP IN ITALIA

Dott. Loris Nadotti
Presidente, Associazione Nazionale tra gli Incubatori Universitari di impresa PNI Cube

17:00 DISCUSSIONE E CONCLUSIONE

17:15 CHIUSURA DEI LAVORI

CHAIRPERSON



Laura
Tassinari



Matteo
Bonfanti



Tomaso
Marzotto
Caotorta



Loris
Nadotti

TUTORIAL NANOTECNOLOGIE: APPLICAZIONI

CHAIRPERSON

Ing. FRANCESCO MARINUZZI

*Presidente AIRIN (Associazione Ingegneri di Roma per l'Innovazione)
e Managing Partner, MARINUZZI & ASSOCIATES*

 **15:30 - 17:30**

- 15:30 INTRODUZIONE A CURA DEL MODERATORE**
- 15:40 LE NANOTECNOLOGIE E IL LORO IMPATTO SUL MONDO INDUSTRIALE**
Dott. Carlo Falessi
SELEX SISTEMI INTEGRATI
- 16:10 APPLICAZIONI BIOLOGICHE DI NANOMATERIALI E NANOSTRUTTURE**
Dott.ssa Alessandra Quarta
Istituto di Nanoscienze - CNR Lecce
- 16:40 MULTISCALE SCIENCE BASED NANO TO MACRO SOCIETY**
Dott. Alessandro Formica
HPC and Modeling & Simulation Consultant
- 17:10 DISCUSSIONE E CONCLUSIONE**
- 17:30 CHIUSURA DEI LAVORI**

CHAIRPERSON



Francesco
Marinuzzi



Carlo
Falessi



Alessandra
Quarta



Alessandro
Formica

PRESENTAZIONE START UP

CHAIRPERSON

Prof. STEFANO FANTONI

Presidente, ANVUR (Agenzia Nazionale Valutazione del sistema Universitario e della Ricerca)

 **09:00 - 10:20**

09:00 APERTURA LAVORI

Ing. Domenico Piazza
Senior Partner, ITER

09:05 BENVENUTO

Prof. Fabrizio Vestroni
Preside, Facoltà di Ingegneria Civile e Industriale - Università Sapienza di Roma

09:10 INTRODUZIONE A CURA DEL MODERATORE

09:20 PRESENTAZIONE START UP NUMERO 1 - GEXNANO

09:30 PRESENTAZIONE START UP NUMERO 2 - NANOMED

09:40 PRESENTAZIONE START UP NUMERO 3 - TIBERLAB

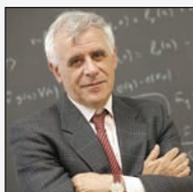
09:50 PRESENTAZIONE START UP NUMERO 4 - NEXTMATERIALS

10:00 PRESENTAZIONE START UP NUMERO 5 - NANOSHARE

10:10 PRESENTAZIONE START UP NUMERO 6 - DYERS

10:20 FINE DELLA SESSIONE E VISITA AGLI STAND

CHAIRPERSON



Stefano
Fantoni



Domenico
Piazza



Fabrizio
Vestroni

LE NANOTECNOLOGIE ALLA SAPIENZA

CHAIRPERSON

Prof. MARCO ROSSI

Dipartimento di Scienze di Base ed Applicate per l'Ingegneria, Università Sapienza di Roma

 **10:20 - 10:35**

10:20 INTRODUZIONE A CURA DEL MODERATORE

10:25 IL LABORATORIO DI NANOSCIENZE E NANOTECNOLOGIE DELLA SAPIENZA (SNN-LAB)

Prof.ssa Maria Sabrina Sarto

*Dipartimento di Ingegneria Astronautica, Elettrica, Energetica (DIAEE), Università Sapienza di Roma
e Direttore Centro di Ricerca per le Nanotecnologie applicate all'Ingegneria della Sapienza (CNIS)*

10:30 IL CORSO DI LAUREA DI INGEGNERIA DELLE NANOTECNOLOGIE DELLA SAPIENZA

Prof. Carlo Massimo Casciola

Presidente del Consiglio d'Area di Ingegneria delle Nanotecnologie

10:35 PAUSA LAVORI E VISITA AGLI STAND

IN COLLABORATION WITH



CHAIRPERSON



Marco
Rossi



Maria Sabrina
Sarto



Carlo Massimo
Casciola

PLENARY SESSION

CHAIRPERSON

Dott. MARIO CERCHIA

*Presidente Consorzio Roma Ricerche, Head of business coordination and development unit
Development finance department - Medio Credito Centrale*



11:00 - 13:00

11:00 INTRODUZIONE A CURA DEL MODERATORE

11:10 OBIETTIVI DI NANOFORUM 2011

Ing. Domenico Piazza
Senior Partner, ITER

11:30 THE NANOFUTURES' PROJECT FOR EUROPEAN INNOVATION

Dott.ssa Cristina Gabellieri
Research Programme Officer, European Commission

11:50 IMPACT OF NANOTECH ON COMMERCIAL APPLICATIONS - FUTURE OUTLOOK

Dott. Ankit A. Shukla
Practise Director, Europe Technical Insights - Frost & Sullivan Global

**12:10 NANOMATERIALI DI CARBONIO, DAL GRAFENE AL NANODIAMANTE:
LA PROSSIMA ERA TECNOLOGICA DOPO IL SILICIO?**

Dott.ssa Silvia Orlanducci,
Dipartimento di Scienze e Tecnologie Chimiche, Università di Roma "Tor Vergata"

**12:30 MICROSCOPIA ELETTRONICA A TRASMISSIONE E IMAGING ATOMICO:
RECENTI PROGRESSI E RICADUTE TECNOLOGICO-INDUSTRIALI**

Dott. Marco Vittori Antisari
ENEA - Unità Tecnica Tecnologia dei Materiali, Casaccia Roma

12:50 DISCUSSIONE E CHIUSURA LAVORI

13:00 LIGHT LUNCH CON GLI ESPOSITORI E VISITA AGLI STAND

CHAIRPERSON



Mario
Cerchia



Domenico
Piazza



Cristina
Gabellieri



Ankit
Shukla



Silvia
Orlanducci



Marco Vittori
Antisari

ENERGY, ENVIRONMENT & NANOSYSTEMS I

CHAIRPERSON

Prof. BRUNO SCROSATI

Dipartimento di Chimica, Università Sapienza di Roma

 **14:00 - 15:45**

- 14:00 INTRODUZIONE A CURA DEL MODERATORE**
- 14:15 CELLE FOTOELETTRICHE PER LA CONVERSIONE ED IL CONTROLLO DELL'ENERGIA SOLARE: NANOMATERIALI E ARCHITETTURE INTELLIGENTI**
Dott. Michele Manca, *Center for Biomolecular Nanotechnologies - ITALIAN INSTITUTE OF TECHNOLOGY*
- 14:30 NANOMATERIALI E SISTEMI DI MICRO-SENSORI PER LA SOSTENIBILITÀ ENERGETICO-AMBIENTALE**
Dott. Michele Penza, *ENEA - Brindisi Technical Unit of Technologies for Materials*
- 14:45 OLEDs (ORGANIC LIGHT EMITTING DIODES): DISPLAY E ILLUMINAZIONE PER IL FUTURO**
Dott. Leonardo Mattiello, *Dipartimento di Scienze di Base e Applicate per l'Ingegneria, Università Sapienza di Roma*
- 15:00 CELLE SOLARI A COLORANTE BASATE SU NANOTUBI DI TITANIA**
Dott.ssa Serena Gagliardi, *ENEA - Unità tecnica Tecnologie dei Materiali, Casaccia Roma*
- 15:15 FOTOCALISI ASSISTITA DA NANOTiO₂ PER PRODUZIONI INDUSTRIALI E SOSTENIBILITÀ AMBIENTALE**
Prof. Angelo Chianese, *Dipartimento di Ingegneria Chimica Materiali Ambiente, Università Sapienza di Roma*
- 15:30 DISCUSSIONE E CONCLUSIONE**
- 15:45 PAUSA LAVORI E VISITA AGLI STAND**

IN COLLABORATION WITH



CHAIRPERSON



Bruno
Scrosati



Michele
Manca



Michele
Penza



Leonardo
Mattiello



Serena
Gagliardi

SOLGEL FOR TEXTILE

CHAIRPERSON

Prof. ALBERTO CIGADA
Politecnico di Milano

 **14:00 - 15:30**

- 14:00** INTRODUZIONE A CURA DEL MODERATORE
- 14:15** LE POSSIBILI FUNZIONALIZZAZIONI DELLA TECNOLOGIA SOLGEL
Ing. Luigi De Nardo
POLITECNICO DI MILANO
- 14:35** TECNOLOGIE SOL-GEL E STAMPA INK-JET: LE SINERGIE
Ing. Giovanni Dugnani
TPA - Tecnologie e Prodotti per l'Automazione
- 14:55** ENGINEERING FOR SMART TEXTILE NANOMATERIALS
Dott. Francesco Toschi
*Dipartimento di Scienze e Tecnologie Chimiche, Università di Roma "Tor Vergata"
Nanoshare Srl*
- 15:15** DISCUSSIONE E CONCLUSIONE
- 15:30** PAUSA LAVORI E VISITA AGLI STAND

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DI MILANO



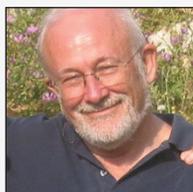
CHAIRPERSON



Alberto
Cigada



Luigi
De Nardo



Giovanni
Dugnani



Francesco
Toschi

ENERGY, ENVIRONMENT & NANOSYSTEMS II

CHAIRPERSON

Ing. GIANFRANCO INNOCENTI
Centro Ricerche Fiat

 **16:15 - 18:00**

- 16:15 INTRODUZIONE A CURA DEL MODERATORE**
- 16:25 MATERIALI MICRO E NANOSTRUTTURATI PER APPLICAZIONI IN BATTERIE**
Prof. Bruno Scrosati, *Dipartimento di Chimica, Università Sapienza di Roma*
- 16:40 SPRAY COATING TECHNIQUE: A ROUTE FOR THE REALIZATION OF LOW COST, LARGE AREA AND FLEXIBLE POLYMER SOLAR CELLS**
Dott.ssa Francesca Brunetti, *Dipartimento di Ingegneria Elettronica, Università di Roma "Tor Vergata"*
- 16:50 NANOSCALE ASSEMBLING OF MATERIALS FOR THE HYDROGEN STORAGE: SYNERGY BETWEEN RESEARCH AND ENTERPRISE**
Prof. Rosario Cantelli, *Dipartimento di Fisica, Università Sapienza di Roma*
- 17:05 NANOTUBI DI OSSIDO DI TITANIO PER LA PRODUZIONE FOTO-ELETTROCHIMICA DELL'IDROGENO**
Prof. Mauro Pasquali, *Dipartimento di Scienze di Base e Applicate per l'Ingegneria, Università Sapienza di Roma*
- 17:20 SVILUPPO DI MATERIALI BASATI SU NANOTITANIA PER APPLICAZIONI ENERGETICHE**
Dott. Mauro Falconieri, *ENEA - Unità Tecnica Tecnologie dei Materiali, Casaccia Roma*
- 17:35 ASSORBIMENTO DI IDROGENO IN NANOTUBI DI CARBONIO: UN MODELLO MULTISCALE A LIVELLO ATOMICO**
Dott. Massimo Celino, *ENEA - Unità Tecnica Tecnologie dei Materiali, Casaccia Roma*
- 17:50 DISCUSSIONE E CONCLUSIONE**
- 18:00 CHIUSURA DEI LAVORI**

IN COLLABORATION WITH



CHAIRPERSON



Gianfranco
Innocenti



Bruno
Scrosati



Francesca
Brunetti



Rosario
Cantelli



Mauro
Pasquali



Mauro
Falconieri



Massimo
Celino

NANOTECH FOR CLEANING EXCELLENCE

CHAIRPERSON

Prof. ALBERTO CIGADA
Politecnico di Milano

 **16:00 - 17:30**

- 16:00** INTRODUZIONE A CURA DEL MODERATORE
- 16:10** SUPERFICI SELF CLEANING E ANTIBATTERICHE
Geom. Alessandro Torretta
NANOTECH SURFACE
- 16:30** DETERGENTI AD IMPATTO ZERO E ANTIBATTERICI
Dott. Giorgio Romeo
Presidente, ECOSOLUTIONS
- 16:45** ESEMPI DI CLEANING EXCELLENCE
Dott. Domenico Pollani
ISS Facility Services S.r.l.
- 17:10** DISCUSSIONE E CONCLUSIONE
- 17:30** CHIUSURA DEI LAVORI

IN COLLABORATION WITH



IL PARTNER PER L'ECOSOSTENIBILITÀ



CHAIRPERSON



Alberto
Cigada



Alessandro
Torretta



Giorgio
Romeo



Domenico
Pollani

BUILDING & CONSTRUCTION I

CHAIRPERSON

Prof. GIANMARIO MARTRA

*Dipartimento di Chimica IFM, Centro Interdipartimentale di Eccellenza
"Nanostructured Interfaces and Surfaces" (NIS), Università degli Studi di Torino*

 **09:00 - 10:30**

- 09:00 INTRODUZIONE A CURA DEL MODERATORE**
- 09:10 PROTETTIVI ANTIFOSFATAZIONE PER LA CONSERVAZIONE DEL PATRIMONIO MONUMENTALE**
Geom. Alessandro Torretta
A.T. MARMO SERVICE
- 09:30 NANOMATERIALI PER LA CONSERVAZIONE IN AMBIENTE MUSEALE**
Dott. Marco Nicola
ADAMANTIO - Spin off dell'Università degli Studi di Torino
- 09:50 MATERIALI E SISTEMI NANOTECNOLOGICI PER LA BIO-EDILIZIA**
Dott. Carlo Leardini
NEW CHEMICAL TECHNOLOGY
- 10:10 DISCUSSIONE E CONCLUSIONE**
- 10:30 PAUSA LAVORI E VISITA AGLI STAND**

IN COLLABORATION WITH



CHAIRPERSON



Gianmario
Martra



Alessandro
Torretta



Marco
Nicola



Carlo
Leardini

NANOBIOMEDICINE I

CHAIRPERSON

Prof. ALBERTO ALBERTINI

Capo della Segreteria Tecnica per le politiche della ricerca, MIUR

Presidente della V Sezione del Consiglio Superiore di Sanità Ministero della Salute

Professore Ordinario di Biochimica attualmente associato all'Istituto di Tecnologie Biomediche del CNR

 **09:30 - 11:00**

09:30 CHAIRPERSON'S INTRODUCTION

**09:45 BIOMATERIALS BASED ON NANOSTRUCTURED POLY(LACTIC ACID):
NANOTOPOGRAPHY, NANOPARTICLES AND NANOCOMPOSITES**

Dott.ssa Ilaria Armentano

Università degli Studi di Perugia

10:05 NANOSTRUCTURED SILICON-BASED SYSTEMS FOR BIO-MEDICAL APPLICATIONS

Prof.ssa Marina Scarpa

Università degli Studi di Trento

10:25 SUPERPARAMAGNETIC NANOPARTICLES FOR CLINICAL AND DIAGNOSTIC APPLICATIONS

Prof. Mario Barteri

Dipartimento di Chimica, Università Sapienza di Roma

10:45 DISCUSSION AND CONCLUSION

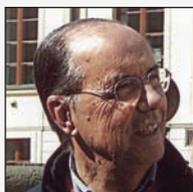
11:00 COFFEE BREAK AND VISIT TO EXPO-AREA

IN COLLABORATION WITH



Finanziaria laziale
di sviluppo

CHAIRPERSON



Alberto
Albertini



Ilaria
Armentano



Marina
Scarpa

BUILDING & CONSTRUCTION II

CHAIRPERSON

Prof. GIANMARIO MARTRA

*Dipartimento di Chimica IFM, Centro Interdipartimentale di Eccellenza
"Nanostructured Interfaces and Surfaces" (NIS), Università degli Studi di Torino*

 **11:00 - 12:30**

- 11:00 INTRODUZIONE A CURA DEL MODERATORE**
- 11:15 GLI EFFETTI DELLA IONIZZAZIONE OTTENUTI TRAMITE MICRO E NANOMATERIALI**
Dott. Marco Nicola
ADAMANTIO - Spin off dell'Università degli Studi di Torino
- 11:35 PAVIMENTI IN RESINA INNOVATIVI A BASE DI NANOMATERIALI ANTIBATTERICI E IONIZZANTI**
Dott.ssa Anna Laura Ravera
APS Srl - Prodotti Speciali
- 11:55 PITTURALE MURALE ECOATTIVA PER IL RISPARMIO ENERGETICO**
Geom. Alessandro Torretta
NANOTECH SURFACE
- 12:15 DISCUSSIONE E CONCLUSIONE**
- 12:30 LIGHT LUNCH CON GLI ESPOSITORI E VISITA AGLI STAND**

IN COLLABORATION WITH



CHAIRPERSON



Gianmario
Martra



Marco
Nicola



Anna Laura
Ravera



Alessandro
Torretta

NANOBIOMEDICINE II

CHAIRPERSON

Dott. LEONARDO VINGIANI
Direttore, ASSOBIOTEC



11:30 - 13:00

11:30 CHAIRPERSON'S INTRODUCTION

11:45 NANOSENSORS: A NEW FRONTIER FOR MOLECULAR DIAGNOSTICS

Prof. Fabrizio Pirri
Politecnico di Torino, Istituto Italiano di Tecnologia

12:00 MAGNETIC NANOPARTICLES AND FERROFLUIDS FOR BIOMEDICAL APPLICATIONS

Dott.ssa Mariangela Bellusci
ENEA - Unità Tecnica Tecnologie dei Materiali, Casaccia Roma

12:15 IN DEFINITION

Prof.ssa Stefania Panero
Dipartimento di Chimica, Università Sapienza di Roma

12:30 IMAGING RADIATION DETECTORS FOR NANO-BIO-PHOTONICS BASED ON LUMINESCENCE OF POINT DEFECTS IN THIN FILMS

Dott.ssa Rosa Maria Montereali
ENEA - Unità Tecnica Sviluppo applicazioni delle radiazioni, Frascati

12:45 DISCUSSION AND CONCLUSION

13:00 LIGHT LUNCH AND VISIT TO EXPO AREA

IN COLLABORATION WITH



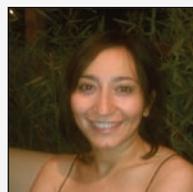
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Leonardo
Vingiani



Fabrizio
Pirri



Mariangela
Bellusci



Rosa Maria
Montereali

AEROSPACE & SECURITY I

CHAIRPERSON

Ing. GERARDO LANCIA

Head of the Technological Districts Division and Reti di Impresa, FILAS



14:00 - 15:30

14:00 CHAIRPERSON'S INTRODUCTION

14:15 NANO STRUCTURED CARBON FIBER REINFORCED PLASTIC FOR AEROSPACE APPLICATION

Ing. Kris Bordignon

Managing Director, Aeronautical Service

14:30 RF MICRO- AND NANO-SYSTEMS FOR SPACE APPLICATIONS

Dott. Romolo Marcelli

Responsible Delegate, CNR-IMM Roma

14:45 NANOSATELLITES FOR DUAL APPLICATIONS

Ing. Armando Orlandi, *President, PSI (Progetti Speciali Italiani Srl)*

Ing. Paolo Ricci, *PSI (Progetti Speciali Italiani Srl)*

15:00 CONFIGURABLE SMART MICROSENSOR PLATFORM WITH NANOSTRUCTURES FOR CHEMICAL, BIOLOGICAL AND RADIOLOGICAL MULTI-ANALYTE DETECTION

Dott. Roberto Simmarano

President & CEO, Sensichips srl

15:15 DISCUSSION

15:30 CONCLUSION

IN COLLABORATION WITH



CHAIRPERSON



Gerardo
Lancia



Kris
Bordignon



Romolo
Marcelli



Armando
Orlandi



Paolo
Ricci



Roberto
Simmarano

FUNCTIONAL MATERIALS & MEMS I

CHAIRPERSON

Dott. CARLO CASARI
Politecnico di Milano

 **14:30 - 16:00**

- 14:30 CHAIRPERSON'S INTRODUCTION**
- 14:35 UNIAXIAL AND BIAXIAL RESONANT MICRO ACCELEROMETERS**
Prof. Alberto Corigliano
Politecnico di Milano
- 14:50 SI NANOCRYSTALS FOR ADVANCED MICROELECTRONICS AND PHOTOVOLTAIC APPLICATIONS**
Dott. Michele Perego
MDM CNR-IMM
- 15:05 CASE HISTORY: AGILENT TECHNOLOGIES AND NANOTECHNOLOGIES**
Ing. Roberto Cerruti
Agilent Technologies
- 15:20 NANOSTRUCTURED COATINGS OBTAINED BY THERMAL SPRAY TECHNIQUES**
Ing. Giovanni Pulci
INSTM, Dipartimento di Ingegneria Chimica, Materiali, Ambiente – Università Sapienza di Roma
- 15:35 HYDROGEN ADSORPTION AT HIGH PRESSURE IN CARBON NANOSTRUCTURES: EQUILIBRIUM AND KINETIC PROPERTIES**
Prof. Raffaele Agostino
Dipartimento di Fisica, Università della Calabria
- 15:50 DISCUSSION AND CONCLUSION**
- 16:00 COFFEE BREAK AND VISIT TO EXPO-AREA**

IN COLLABORATION WITH



Agilent Technologies



**POLITECNICO
DI MILANO**

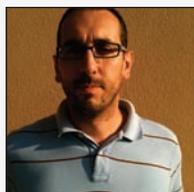
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Carlo
Casari



Alberto
Corigliano



Michele
Perego



Roberto
Cerruti



Giovanni
Pulci



Raffaele
Agostino

AEROSPACE & SECURITY II

CHAIRPERSON

Ammiraglio LUCIO ACCARDO
AFCEA Capitolo di Roma

 **16:00 - 18:00**

16:00 INTRODUZIONE A CURA DEL MODERATORE

16:10 NANOTECHNOLOGY APPLICATIONS IN LARGE AND MICRO COMPANIES

Dott. Carlo Falessi,
SELEX SISTEMI INTEGRATI

16:30 NANOTECHNOLOGY MULTISCALE PROJECT - NMP

Dott.ssa Anna Maria Fiorello,
SELEX SISTEMI INTEGRATI

16:50 NANO-TERAHZ FOR AEROSPACE AND SECURITY APPLICATIONS

Prof. Aldo Di Carlo,
Dipartimento di Ingegneria Elettronica, Università di Roma "Tor Vergata"

17:10 MWCNT FOR TUNING ELASTIC AND VISCOELASTIC PROPERTIES OF ELASTOMERIC MATERIALS

Dott. Marco Aurilia,
IMAST S.c.a.r.l.

17:30 DISCUSSIONE E CONCLUSIONE

18:00 CHIUSURA DEI LAVORI

IN COLLABORATION WITH



CHAIRPERSON



Lucio
Accardo



Carlo
Falessi



Anna Maria
Fiorello



Aldo
Di Carlo



Marco
Aurilia

FUNCTIONAL MATERIALS & MEMS II

CHAIRPERSON

Dott. CARLO CASARI, *Politecnico di Milano*

Prof. TEODORO VALENTE

*Dipartimento di Ingegneria Chimica, Materiali, Ambiente, Università Sapienza di Roma
e Direttore del Consorzio INSTM*

 **16:30 - 18:00**

16:30 CHAIRPERSON'S INTRODUCTION

16:45 MULTIPHYSICS MODELING OF MEMS DEVICES

Dott. Cesare Tozzo, *COMSOL*

17:00 ELECTRICAL AND ELECTROMECHANICAL PROPERTIES OF GNPS BASED NANOCOMPOSITES FOR ELECTROMAGNETIC SHIELDING AND STRAIN SENSOR APPLICATIONS: EFFECTS OF PROCESS PARAMETERS

Prof.ssa Maria Sabrina Sarto, *Dipartimento di Ingegneria Astronautica, Elettrica, Energetica (DIAEE),
Università Sapienza di Roma e Direttore Centro di Ricerca per le Nanotecnologie applicate all'Ingegneria della Sapienza (CNIS)*

17:15 LASER PATTERNING AND NANOCOMPOSITE MATERIALS AS TOOLS FOR OLED/T MANUFACTURING

Dott. Francesco Antolini, *ENEA, Unità Tecnologie dei Materiali Faenza*

17:30 NANO/MICRO POROUS STRUCTURES AT CNIS: AN INDUSTRIAL APPLICATION POINT OF VIEW

Dott. Marco Balucani
Dipartimento di Ingegneria dell'Informazione, Elettronica e Telecomunicazioni, Università Sapienza di Roma

17:45 DISCUSSION

18:00 CONCLUSION

IN COLLABORATION WITH



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DI MILANO

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Carlo
Casari



Teodoro
Valente



Cesare
Tozzo



Maria Sabrina
Sarto



Francesco
Antolini



Marco
Balucani

CHAIRPERSON



Ing. LEO SORGE,
Cloud Scene

EVENTO SATELLITE PRIMO REPRAP MEETING ITALIANO

 **14:00 - 17:30**

INCONTRO SULLA STAMPA 3D

Il PC come modeling device sta finendo la sua corsa come dispositivo singolo, ma inizia ora la sua vita come ispiratore di altri dispositivi e soluzioni. Tra questi la stampa 3D, della quale l'incontro mette in risalto quattro aspetti.

Tecnologicamente valido. Le stampanti 3D si candidano come prossima vera rivoluzione, quanto e più dei pad. Varie tecnologie stanno convergendo, dando vita al mito del replicatore universale a risoluzione micrometrica, con stampa di materiali diversi, anche a colori.

In cerca di un business model. Contenuti, distributori di contenuti e device si affastellano senza sosta, secondo modelli che in qualche modo ricalcano quanto già avvenuto nel mercato video (p2p), musicale e soprattutto librario. Ad oggi non c'è ancora un movimento solido dei contenuti, ma grazie al cloud computing e ai nuovi formati per la stereolitografia si potrebbe assistere ad uno sviluppo imprevedibile: in tempi, che anche se non ancora brevissimi, saranno certo brevi.

Open sourcing. Come sempre accade dal dopo Linus Torvalds, esiste una forte community Open, che prese l'avvio nel 1998 grazie al RepRap di Adrian Bower.

Storicamente solido. Ideato da Samule Morse, teorizzato da Von Neumann, fantastica-ta nella fantascienza, avviato in tempi recenti da Neil Gershenfeld, evocato con il nome di Spime dal saggista e scrittore Bruce Sterling (Shaping Things, Apogeo 2005), da sempre nell'immaginario televisivo e cinematografico.

Insomma, la stampa 3D è arrivata e il RepRap ne è la versione a basso costo e ad alto coinvolgimento.



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EVENTO SATELLITE PRIMO REPRAP MEETING ITALIANO

CHAIRPERSON

Dott. Ing. LEO SORGE
CLOUD SCENE

 **14:00 - 17:30**

INCONTRO SULLA STAMPA 3D

14:00 PROIEZIONE DI VIDEO INTRODUTTIVI

14:30 ASSEMBLAGGIO DI UN REPRAP E INTRODUZIONE ALLA STAMPA 3D

Ing. Leo Sorge,
Cloud Scene

15:30 TALK SHOW: "L'ERA DEL 3D PRINTING"

CONTEMPORANEAMENTE: STAMPA DI UN OGGETTO TRIDIMENSIONALE

Lorenzo Cantini,
Gruppo Kent's Strapper

Alessandro Nasini,
Business Angel

Alessandro Ranellucci,
Software designer

Francesco Verso,
Scrittore connettivista e editore digitale

Valeria Vito,
Circuit Bender & Designer

16:30 OMAGGIO AI REPLICATORI DELLA FANTASCIENZA: L'OPERA DI TINO FRANCO

17:00 TUTORIAL - INTRODUZIONE AL REPRAP

Alessandro Ranellucci
Software designer

17:30 CHIUSURA DEI LAVORI

CHAIRPERSON



Leo
Sorge



Lorenzo
Cantini



Alessandro
Nasini



Alessandro
Ranellucci



Francesco
Verso



Valeria
Vito

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