HEP Tech

Leading HEP technologies for industry
Technology Transfer opportunities

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Contributions from represented individuals

Knowledge and technology developed for particle physics have made a lasting impact on society. To date, the most noticeable impact is in medicine with in medical imaging and cancer therapy and in electronics where ion implanters have made modern microelectronics possible.

In 2006, the European Strategy of Particle Physics (ESP) emphasized the need of enhancing and broadening the impact of Particle Physics on society. To this end, the CERN Council created HEPTech to address this issue.

Today, HEPTech is central to the coordination and promotion of knowledge and technology transfer activities to industry and society. Council's acknowledgement of our efforts is a very encouraging message. I am convinced that the Nodes will pursue and amplify their efforts along the line recommended by the Council.

I look forward to the next 12 months, and seeing the development of a very attractive work plan for 2014 and the implementation of a dynamic communication strategy to increase the visibility of Particle Physics amongst the various stakeholders.

Chairman

Over the years, particle physicists have pushed boundaries in technology to make scientific discoveries possible. The ideas and innovations developed in particle physics have entered the mainstream to transform the way we live. It is the process of trying to answer the most difficult curiosity driven questions, which has generated the most impact to society.

As a result, HEPTech offers unrivalled skills, capabilities, technologies and opportunities in the high energy physics community. We have started the journey of sharing with the world what we can do for them. For industry, our Academic Industrial matching events are growing in popularity. We are beginning to hear the case studies of their success and long may it continue.

As a network, we have applied for our first European grant and I hope to see many more of these over the coming year. Other funding issues are actively being discussed at the European Commission level as we get ready for the arrival of Horizon 2020. Already we have discussed how we can integrate and drive the strategic pre-procurement agenda. We are getting ready to showcase the skills of our brightest Early Stage Researchers in our first European PhD Symposium, which I very much look forward to.

As global challenges increase, HEPTech's breadth of technology excellence and innovation will become increasingly important. We can help bridge the gap between research and industry and accelerate this process for the benefit of the global economy and society as a whole.

The yearbook gives insight into what fantastic capabilities and potential we have.

So much has been done by so many this year but I must mention Antonio and Charlotte for being the glue that keeps us all together.

I look forward to the next 12 months, and seeing more of the enthusiasm, dedication and energy that has been a hallmark of the HEPTech members over the last year. Please keep it up and enjoy the ride.

Secretary General

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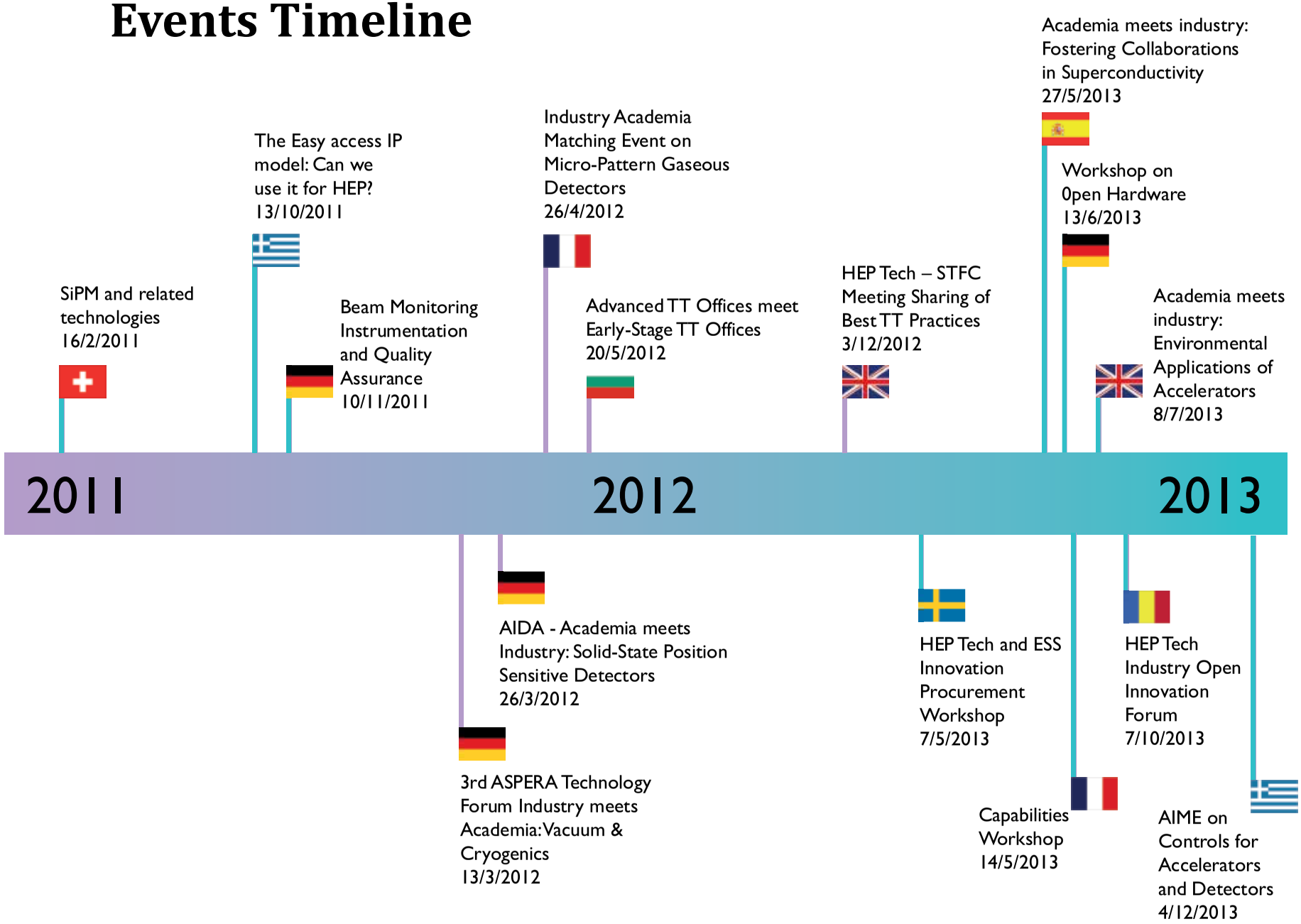
HEPTech Impact

Events Timeline



Industry-academia matching event on SiPM and related technologies

16th-17th February 2011, CERN, Globe of Innovation

This was the first industry-academia matching event on silicon photomultipliers (SiPMs) and related technologies. It attracted around 140 participants from academia (67%) and industry (33%), representing 43 public research organisations and 21 companies.

SiPMs represent the state-of-the-art in low-light detection. Their characteristics and costs make them increasingly attractive for particle physic experiments as well as for research applications. However, turning a SiPM into a real detecting device or instrument requires the development of appropriate front-end electronics and data acquisition systems, together with the integration of a large number of sensors. The particle physics community have pioneered the use of SiPMs over the past decade, which has led to strong technological know-how and expertise in this area that could be beneficial to other fields.

The event, organised over two half days, aimed to foster an exchange between various stakeholders from industry and academia, provide an overview of the latest technologies and define a roadmap towards collaborative R&D for the development of SiPMs in different applications.

The first day began with a summary of state-of-the-art SiPM production and readout electronics in high energy physics. This was followed by a review on the application of SiPMs in medical imaging. It was raised that there is an enormous R&D effort to improve the light-detection efficiency and the timing performance of SiPM-based detection modules. The astroparticle physics community also demonstrated an increasing interest in the use of SiPMs for photon detection in future experimental setups and the use of SiPMs in life-science imaging, which requires the excellent timing characteristics of these devices.

Additionally, on the first day there was a presentation from an industry perspective. This focused around medical imaging and the importance of taking into account market constraints, business prospects and intellectual property management when transferring such technologies into industry. It ended with a field report on the technology transfer of a SiPM readout kit, illustrating the potential of technology transfer and expertise in particle physics.

The second day focused on companies presenting their product portfolio and research capabilities, as well as their availability to participate in joint R&D programmes with academia.

The event was a great opportunity for different communities to make contact and spark discussion. This was prompted by demonstrations set up by researchers promoting their technologies and various company booths. Sixteen technology fact-sheets were made available on the event's website, together with job offers and CV's, making the meeting a real market place. Such lively discussions were had that most agreed it would be beneficial to have more time to network.

The results of a feedback questionnaire after the event showed the organisation, venue and structure to have been highly appreciated.

The participants expressed strong interest in a follow up event that focused more on the technology transfer aspects and related services in order to increase the effectiveness of collaborations between academia and industry.

The Easy access IP Model: Can we use it for HEP?

13th October 2011, Sematron, Greece

The workshop focused on the application of the Easy access IP model, developed at the University of Glasgow, to facilitate the licensing to industry of patents that the TT Office had no success in licensing after using the standard TT tools.

Through discussions on the pros and cons of Easy assess and how this could be used in HEP, it was concluded that the Easy access IP model would be applicable. This was on the premise that attention should be placed in the implementation details, especially with regard to the limited support academia could provide to the licensees. It was agreed that a further meeting on the Easy access model for HEP should be arranged to address these issues.

CHALMERS

KØBENHAVNS UNIVERSITET

Industry meets Academia: Beam Monitoring Instrumentation and Quality Assurance

10th -11th November 2011, GSI, Darmstadt, Germany

This initiative brought together the brightest minds in the fields from both academia and industry. The workshop aimed to be a platform to present and discuss current developments and standing issues in the field of beam monitoring, to find synergies and common grounds.

There were 21 invited talks from companies and academia, 20 poster exhibits and 8 company stands to present their company and/or research.

This was the second Academia-Industry Matching Event AIME organised by HEPTech. Through a survey it was confirmed that the format, setting and organisation are very important to facilitate exchanges among participants and trigger discussions on possible collaborations.

3rd ASPERA Technology Forum Industry meets Academia: Vacuum & Cryogenics

13th -14th March 2012, GSI, Lichtenberg-Haus, Darmstadt, Germany

European physicists in astroparticle physics as well as in neighbouring fields are planning the next generation of experiments to be built within the next decade. The success of the projects in direct dark matter detection, low energy neutrino physics, proton decay, neutrino properties, gravitational wave detection as well as related accelerator based experiments in particle and nuclear physics highly depends on challenging technologies in the domain of vacuum and cryogenics.

For a thorough planning of all stakeholders it is important to carefully elaborate the timing of the projects and their needs as well as the market availability of key products. The ASPERA Technology Forum was organized jointly with the HEPTech network to identify synergies between projects from neighbouring fields and provided a discussion forum for companies, project scientists and funding agencies to define future ways of boosting cooperation to the benefit of all stakeholders.

This provided an excellent context for initiating and fostering relations between academia and companies. Sessions were organised with presentations from both academia and industry, which identified the needs of projects and the present performance of technical capabilities within companies. This was extensively discussed and improvements in innovation recognized.

Representatives were brought together from academia and industry; 86 participants were researchers and engineers from the Astrophysics community and neighbouring fields, and 51 participants from industry. This enabled a broad range of challenges relating to cryogenics and vacuum to be investigated.

There were some general findings that are of interest in the arena of technology transfer. One of the key difficulties identified was ‘culture’. That is there are very different motivations between researchers in fundamental science and that of R&D experts in industry; for example the flexibility inherent with academic research on the one hand, and investigative problems with a pre-defined final industrial product on the other.

The main axe of improvement was highlighted as deepening mutual understanding and respect. It was recognised that for companies they may not always be interested in working directly with researchers given that the needs are often challenging and profit marginal. However when new large experimental

projects are planned or considered, a strong R&D cooperation would be more attractive, developing novel ideas/ techniques with companies to commercialise them. To achieve this, it was raised that industrial suppliers would want to engage in the process at an early stage in order to plan the relevant R&D; although this revealed a problem with 'call for tender' regulations. A company associated with an emerging project could not reply to the call. Therefore technical divisions in large laboratories have to play this role that otherwise would have been ensured by companies.

For companies, it was considered that more transparency was needed in academia on issues such as decision making, responsibilities, funding resources, time schedule, and strategic and political circumstances.

Additionally, academia drew attention to the lack of expertise from researchers in intellectual property and confidentiality issues, which can upset the effectiveness of exchanges between researchers from academia and industry. Often this results in matters being handled by the unavoidable procedure of using an institution's lawyers.

The great majority of those who participated stated that their attendance to the forum had an impact of their project. This was either through their on-going projects, or for the most part, in new topics that will be of significant importance in the future.

Both communities agreed it would be good to have a database that showed the future projects and collaborations between research institutes, universities and companies. Although it was brought to everyone's attention that this would require dedicated personnel to ensure reliability and regular updates.

The forum was considered highly successful and participants underlined that regular meetings in the same spirit would be highly desirable.

Academia meets Industry on Position – Sensitive Solid-State Detectors

26th -27th March 2012 DESY in Hamburg, Germany

The purpose of this event was to review what is considered to be at the forefront in the field of particle and photon sensing and provide an overview of its key application areas, as well as to facilitate the exchange of information between academia and industry and foster more R&D collaborations between them.

There were 68 attendees from 25 institutions and 18 attendees from 15 companies; Representative of the particle physics community, industry (semi-conductor manufacturers, original equipment manufacturers), and from the applied research sector (life science imaging, security, dosimetry, synchrotrons, medicine, spectroscopy, beam monitoring, free electron laser monitoring).

It was considered a lively event with many interactions. At the event there was offered 15 early stage researcher positions and 2 for experienced researchers. It was raised that collaborations with HEP are characerised by long development cycles with long time gaps in between. As a result Academia has identified pertinent areas for early collaboration with industry:

- Pre-procurement
- offered various routes for collaboration
- need for better defined time scales to meet academic demands
- spotted IP issues with academia
- required academia to take some financial risk.

Industry Academia Matching Event on Micro-Pattern Gaseous Detectors

26th -27th April 2012, Laboratoire d'Annecy-le-Vieux de Physique des Particules LAPP, France

This industry-academia matching conference on Micro-Pattern Gaseous Detector brought together experts from industry and academia to provide an overview on state-of-the art technologies and to define a roadmap towards collaborative R&D on key solutions for MPGD in different application domains.

Micro-Pattern Gaseous Detectors (MPGD) are advanced gas-avalanche detectors of very high importance for high energy physics to detect charged particles, X-rays, gamma rays, and neutrons with suitable cathodes. MPGDs are also used in industrial applications, such as medical imaging, non-destructive examination, homeland security, X-Ray diffraction as well as fundamental and applied science.

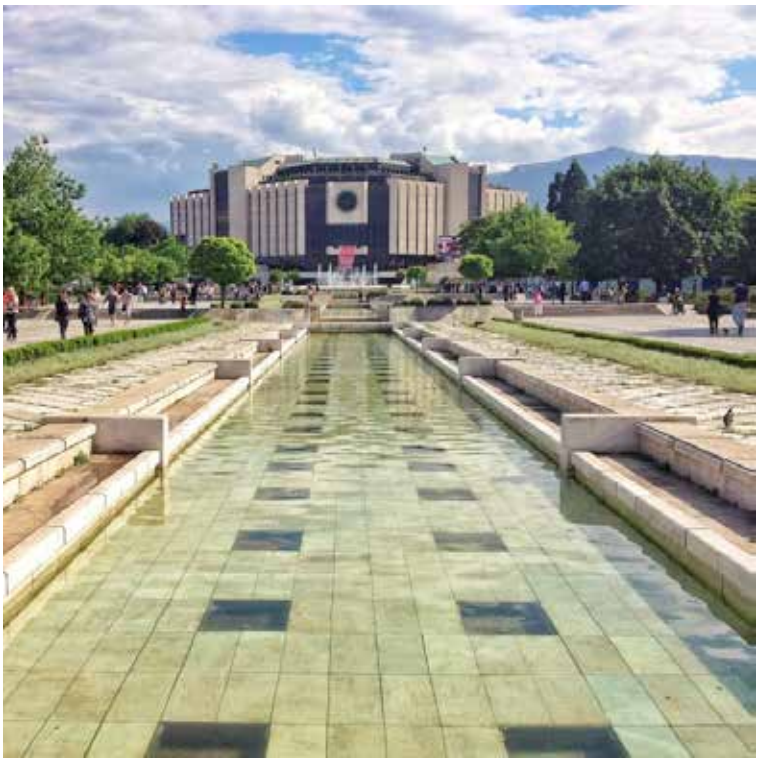
MPGDs offer a high rate capability, a great spatial resolution, a large sensitivity area, with operational stability and radiation hardness. Recent developments allowed for the integration of electronic readouts to reach high channel density. Moreover, the manufacturing process of major types of MPGD, such MICROMEGAS and GEM are compatible with high volume industrial manufacturing, thus presenting good candidates for new applications.

The event attracted 12 companies and academics from 18 institutions. There was predominately an academic presence, which highlighted that MPGD technology is still in the process of being transferred to industry. Of those companies that attended, they were mostly looking for academic contacts to get information on the quantity of detectors they could expect to manufacture and to access the expertise to produce quality devices. Given that the technology is very early stage, a follow-up event should be scheduled in a couple of years to reassess the situation.

CERN cnrs RD51

Advanced TT Offices meet Early-Stage TT Offices

20th – 24th May 2012 Koprivshtitsa, Bulgaria



'This event was the perfect introduction to TT, and to the challenges it provides to an Institution like mine'

The aim of this event was to provide added value to early stage Technology Transfer (TT) offices of HEPTech nodes contributing in services, training and experts to members of the network and other adequate entities.

This was delivered by providing training on the current TT best practices applied in TT offices working within the particle, astro-particle and nuclear physics field.

With the knowledge of the World Intellectual Property Organisation WIPO and HEPTech experts, the workshops focused on best practices in TT licensing, the organisation and structure of a TT Office and other tools implemented to enhance TT in Research Infrastructures within the High Energy Physics field.

Particular reference was made to the 'Successful Technology Licensing' training by WIPO, the art of technology licensing negotiation and the necessary infrastructure for efficient technology transfer processes.

The event was a great introduction to early stage nodes, and was praised for offering a comprehensive overview of technology transfer offices. It was noted that such an introduction should be repeated in the future as a valuable source of training for early stage nodes and should be extended to address other important topics such as Academia Industry R&D collaborations.

WIPO

CERN

cnrs

RD51

Sharing of Best TT Practices - Show and tell

3rd December 2012, STFC, UK

STFC welcomed HEPTech to its Harwell Oxford campus to demonstrate how they manage their campus. It was designed to showcase the various ways that STFC interacts with the many organisations and stakeholders on their campus.

The event started with a Black Tie Dinner at a local Oxford college. HEPTech members were able to meet the local support organisations as well as successful companies on the campus. It was an ideal overview of the innovation ecosystem. The venue was a dining hall that would have graced a Harry Potter hall.

The next day started with a business breakfast. Board members from local companies discussed the problems they face and how they can overcome them. A short talk was given by a Dr David Kingham who raised money from venture financing to fund the development of a tokomak.

Dr Tim Bestwick, CEO of STFC Innovations Ltd, gave the formal start of the day with a welcome address. The first part of the morning discussed the results of a study undertaken on HEPTech by Anne Grithins and Jenny Plaister from 10consulting with Vision. They shared their findings about the complexity of the multinational team that forms HEPTech and made some suggestions on how HEPTech might make improvements. This was followed by a session headed by Penny Woodman from STFC described the different grants that STFC uses to seed the innovation landscape in the UK.

The morning was closed by Mike Curtis-Rouse describing the work of the Harwell Imaging Partnership (HIP). HIP has been established to promote industrial engagement with STFC's X-ray, neutron and laser imaging facilities at the Harwell Campus and provide support to the UK imaging community. The session was made memorable by the different paper planes that were used to illustrate a point.

After a working lunch, Chris Bee discussed the way that STFC has implemented its sales team and the achievements they have delivered. Chris also covered the challenges that running such a team brings. This led into a discussion led by John Panczak and Nick Richards from Laudis about how the Technology Entrepreneurs Forum is used by the various campus partners and the benefits that it brings them. They gave an overview of a typical event and how they were organised.

Mark White from the Rainbow Seed fund gave an overview of how this particular evergreen seed stage fund operates. He also gave examples of the companies they had invested in and set expectations on the challenges and difficulties of running such a fund. Catherine Ewart from the STFC Futures team was up next who explained that the Futures Programme was created as STFC's response to ensuring that skills and technology originally developed to address fundamental research questions are harnessed effectively to provide solutions to the global challenges.

The Innovations Technology Access Centre (I-TAC) was explained next by Martin Morlidge. I-TAC is a unique, fully equipped space for innovation, research and development, providing flexible access to laboratory space, "hot-labs" and £3m of scientific equipment. I-TAC suits start-up companies, small and medium enterprises (SMEs) and research & development teams from established companies. The companies are working in diverse sectors: from medical biosciences and energy and the environment, to down-stream space technologies and advanced materials and the chemical sector.

Ian Tracey ended the day by explaining how the Entrepreneur in Residence scheme operates at STFC and the early wins it had in creating the start-up, Cella Energy. Overall the event was very well received and a rewarding time.

Science & Technology Facilities Council

HEPTech and ESS Innovation Procurement Workshop

7th May 2013, ESS, Sweden

By acting as technologically demanding first buyers, public procurers can drive innovation from the demand side. In December 2007, the European Commission adopted a Communication to promote the use and address the underlying barriers of pre-commercial procurement in Europe. Pre-commercial procurement is an approach where public procurers involve industry at an earlier stage in R&D projects and share the risks and benefits of designing, prototyping and testing new products. This approach is now becoming the focus of attention, in particular in relation with standard procurement. It is also a very pertinent topic for Research Infrastructures. In addition, IP arrangements in pre-commercial procurement contracts may have consequences on the use of the results and therefore impact the TT process. This led us to the conclusion that HEPTech should focus on exploring this subject, and as suggested by ESS and Juan Tomas Hernani, a preparatory workshop went ahead to serve the purpose of providing the basis for further discussions and activities on this subject.

The workshop successfully delivered an overview of pre-commercial procurement. It started with an introduction to the European Commission Guidelines and then looked at how this is applied to practical cases in international research institutions and national public research organisations across Europe. It concluded with a round table discussion to spur future activity.

Capabilities Showcase at CEA

14th -15th May 2013, CEA, Saclay

The meeting took place at CEA/Saclay, within the "Physical Sciences Division", which houses the institute involved with HEPTech called IRFU (Institue of Research into the Fundamental Laws of the Universe). It was a joint event that combined the Steering Committee Meeting, a visit of the laboratories and some complementary seminars.

The core objective was enhance CEA's knowledge of HEPTech to encourage future participation of its experts in working groups and various events, and make HEPTech members aware of the activities at IRFU to create synergies.

The event was considered positively as much by the hosts, as by the visitors. There was strong interest from the management of IRFU towards the HEPTech strategy and actions, and the quality of exchanges was considered good.

irfu
cea
saclay

CEA La recherche fertile Highlights 8th June 2013

Physique des particules : une stratégie pour le transfert technologique aussi !

Alors que sa mission est seulement suggérée dans le document de stratégie européenne pour la physique des particules en 2006, le réseau HEPTech est créé en 2008 et il apparaît en pleine lumière dans la mise à jour de 2013. Le réseau de transfert technologique soutenu par le Cern et ses membres est en train de grandir et pourrait à terme faire école pour les autres grands instruments scientifiques.

Aujourd'hui fort d'une vingtaine d'instituts membres, répartis dans une quinzaine de pays européens, HEPTech cherche à faciliter les transferts de technologie vers les industriels pour les besoins de la physique des particules et plus largement, il a également vocation à donner le coup de pouce qui permet à un industriel d'adapter à d'autres marchés une technologie développée dans ce cadre.

« J'ai vu grandir HEPTech depuis 2008, alors qu'il ne comptait que 4 ou 5 membres, témoigne Sylviane Zaninotti, correspondante à HEPTech pour la DSM. Ce qui est intéressant, c'est que ce réseau est toujours en train d'expérimenter et qu'il élargit le champ de ses actions à des domaines connexes de la physique des particules, comme par exemple la médecine avec le cyclotron compact pour la production d'isotopes médicaux. »

À Saclay, le message a bien été reçu puisque Stéphan Aune, spécialiste des détecteurs de particules Micromégas à l'Irfu, a accepté d'entrer dans un groupe de travail d'HEPTech. Ces détecteurs évoluent à la fois pour préparer la voie au successeur du LHC (International Linear Collider) et pour s'adapter à des marchés comme la dosimétrie, l'imagerie médicale ou… la détection précoce d'incendie.

Comment fonctionne HEPTech ?

· Le réseau organise des forums « laboratoires – entreprises » de deux journées au cours desquelles les chercheurs présentent leurs technologies et les industriels expriment leurs besoins. Ces rencontres favorisent le démarrage de collaborations ou le recrutement de post-doctorants. Fin 2013, aura lieu un forum sur la détection des neutrons. En 2014, la cellule de valorisation de la DSM envisage l'organisation d'un forum sur le thème de la cryogénie.

· Il soutient les chercheurs disposant de technologies potentiellement valorisables pour les aider à franchir les différentes étapes du transfert de technologie. Ces actions sont montées au cas par cas et revêtent des formes variées : conseils et mises en relation par le groupe de travail concerné de HEPTech, diffusion d'offres sur le site web de HEPTech et lors des forums, étude d'opportunités par outil cartographique, etc.

· Il fournit à ses membres un outil permettant de cartographier les dynamiques de recherche des différents acteurs, via leurs publications scientifiques et leurs brevets.

· Grâce à des fonds européens, il va offrir la possibilité à de jeunes chercheurs de se former aux outils de la valorisation au cours de sessions d'une semaine.

· HEPTech propose des séminaires thématiques à destination des chargés de valorisation mais aussi des scientifiques et décideurs, dans des domaines tels que l' « Open Innovation » ou le « Pre-Commercial Procurement ». Les relations entre le Cern et les entreprises participant à la construction des expériences ne peuvent en effet obéir exactement au modèle classique de la relation client – fournisseur. Il est nécessaire d'inventer des règles de fonctionnement plus adaptées aux cahiers des charges « impossibles » des physiciens.

Particle physics: a strategy for technology transfer! 8th June 2013

While HEPTech's mission was only suggested in the European strategy for particle physics in 2006, the HEPTech network was created in 2008 and has come into full light in 2013. The technology transfer network supported by CERN and its members is growing and serves as a model to other research infrastructures.

Twenty member institutes strong, spread across 15 European countries, HEPTech seeks to facilitate technology transfer to industry for the purposes of particle physics and, more broadly, it also gives a boost that allows industry to adapt to other markets and permits the development of technology within this framework.

"I have seen HEPTech grow since 2008, when it had only four or five members" says Sylviane Zaninotti, member of HEPTech for DSM "What is interesting is that the network is always experimenting and it widens the scope of its actions to related areas of particle physics, such as medicine with the compact cyclotron for the production of medical isotopes. "

At Saclay, the message has been received since Stephan Aune, specialist in particle detectors Micromégas at IRFU, agreed to enter into HEPTech's working group on detectors. The detectors being developed for the successor to the LHC could be adapted to markets such as dosimetry, medical imaging ... or even early fire detection.

How does HEPTech work?

· The network organizes forums "academics - industry" two days in which researchers present their technologies and industries express their needs. These meetings promote collaborations and the recruitment of postdocs. End of 2013, will be held a forum on the detection of neutrons. In 2014, the development unit of DSM plans to organize a forum on the subject of cryogenics.

· HEPTech supports researchers with potentially valuable technologies to help them through the various stages of technology transfer. Actions are delivered through the relevant HEPTech working group, offers are disseminated on the website and HEPTech forums, and research opportunities are mapped.

· HEPTech provides its members with a tool to map the dynamics of researchers through their scientific publications and patents.

· Thanks to EU funds, it will provide opportunities for young researchers to train and gain new skills in a one week programme.

· HEPTech offers thematic seminars for those responsible for skills and development as well as scientific policy makers in areas such as 'open innovation' or 'pre-commercial procurement'. The relationship between CERN and the companies gained through these interactions do not strictly obey the classic model of the client and supplier and therefore it is necessary to invent or adapt the rules of operation so as to best suit the specifications that meet the impossible task of physicists.

Academia meets Industry: Fostering Collaboration in Superconductivity

27th -28th May 2013, CEA, Madrid, Spain

Superconductivity was discovered in 1911 and the first superconductivity magnet was manufactured by industry in 1955 for high energy physics. Today superconductivity promises a wide range of industrial applications with some of them close to or in production.

This Industry-Academia Matching Event was organised by HEPTech, CPAN and Ciemat to review the start of the art and forefront developments in applied superconductivity, particularly in the areas of particle physics, electric power applications, medical applications and fusion.

The objective of the event was to share ideas and potential applications in applied superconductivity, to facilitate information exchange, promote new collaborations and address solutions to new challenges where superconductivity would be the most desirable alternative.

The event gave an overview of HEP needs for its research programs and how the community collaborates with industry to meet this. This was followed with presentations on the progress and capabilities of industry in various applications ranging from medicine to magnetic levitation.

The event was very well attended with more than 90 participants from industry and academia. Long coffee breaks gave small companies the opportunity to present their products and capabilities and many discussions continued well after the end of the event.

No doubt that HEP research needs will continue to stimulate High tech developments in industry that will later on find use in almost all applications where manufacturing costs reduction and energy saving are of prime importance for the economy.

Ciemat
Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas

CPAN
Ingenio 2010

Academia Industry event on Superconductivity matching

At the headquarters of CIEMAT in Madrid took place the conference "Academia-Industry event on Superconductivity matching" event in which researchers have gathered experts in the field of superconductivity, as well as companies. These sessions are intended to promote technology transfer and cooperation between the participating agents. Superconducting magnets are the best known and its application is widespread in particle physics and medical physics, for example, among other applications.

In the field of superconductivity, CIEMAT addresses activities focused on the design and manufacture of particle accelerators and their components for different international experimental facilities, and the development of applied electromagnetic systems in the field of energy. In fact, responsible for organizing this event at CIEMAT has been Luis Garcia-Tabares, engineer experienced in the design of superconducting magnets prestige, who currently heads the Electrical Engineering Unit of CIEMAT and former head of the Joint Laboratory for Superconductivity CEDEX -CIEMAT. This laboratory has participated in the construction of the Superconducting Collider LHC (Large Hadron Collider), the European Laboratory for Particle Physics (CERN).

The European network HEPTech technology transfer, the National Center for Particle Physics, Astroparticle and Nuclear (CPAN), CIEMAT and CDTI (Centre for the Development of Industrial Technology), organized the conference "Academia-Industry matching event on Superconductivity ". HEPTech is the technology transfer network in the community of High Energy Physics (High Energy Physics), bringing in her womb the most important European research organizations in this field, allowing access to skills, technologies and R & D opportunities in an open and collaborative (open science).

The objective of this conference is to promote technology transfer and cooperation between research groups and companies in the area of superconductivity. Superconducting magnets, the best known, conduct electricity without resistance and without loss of power, producing intense magnetic fields, which is essential for controlling the trajectories of high energy particles, their application is widespread not only in particle physics, but also in medical physics, magnetic resonance imaging, energy generation and transmission, etc..

The day's program is structured in a series of talks and presentations, so that the exchange of experiences and knowledge between industry and research is maximized. In these days also are showing up, thanks to the booths, products and demonstrations, work involving entities attending the same.

HEPTech Workshop on Open Hardware

13th June 2013 GSI, Darmstadt, Germany

The workshop on open hardware addressed the open source hardware phenomenon and its implications for academia and industry with special attention made to knowledge and technology transfer issues. Discussions that rang throughout the event were how one could implement the open source ideals. This included addressing the different objectives of many stakeholders.

The scene was set with a talk on the emergence of the open hardware phenomena by Dannie Jost (University of Bern). This was then supported with examples of different open hardware projects including CERN's use of open hardware, the Arduino Open Hardware Project, Seven Solutions, Creotech, Raspberry Pi and Ultimaker.

The afternoon began with an overview of open hardware licensing by Moorcrofts LLP. This was supported with a talk by Myriam Ayass, who highlighted the problems with using traditional open source licensing for hardware and shared CERN's solution with the CERN open hardware license.

GSI shared their experience and perspectives of open hardware and the contribution of hardware to the FAIR project.

A summary of the day's talks was enabled through a round table discussion that together with the various networking opportunities throughout the day triggered further discussions and the exchanging of ideas.

HEPTech Academia meets Industry: Environmental Applications of Accelerators

8th -9th July 2013, Cockcroft Institute, Sci-Tech Daresbury, UK

With an increasing industrial focus on resource savings, and the adoption of good environmental practises backed by ever-tightening regulatory requirements, accelerator-based solutions for environmental clean-up and production efficiencies are now transferring from the high energy physics laboratory to the industrial workplace.

This HEPTech event brought together industry experts, scientists, application engineers, supply-chain manufacturers and a range of funding bodies to discuss the potential requirements, limitations and opportunities that cutting edge advances bring to a broad range of environmental applications. The event looked to clarify industry's needs, and foster collaborations which accurately target these requirements with innovative and cost-effective solutions.

The main focus of the day was on water and wastewater treatment, for both municipal and industrial applications. Keynote presentations from United Utilities, Black and Veatch and Microbial Solutions Ltd outlined the main industrial challenges – in particular, the issue of dealing with specific contaminants which are costly to remove, or indeed not treatable at all, with current technologies. The main requirements on technology solutions were also identified, with capital cost, operating cost, ease of integration and energy efficiency being amongst the main priorities. The breakout sessions in the afternoon offered an opportunity for accelerator experts to further explore the applicability of accelerator technology, identifying several routes for more in-depth collaborative work. The meeting concluded that there were significant opportunities in this area and that the technology solution development would require expertise from a range of scientific and engineering disciplines. The meeting organisers will be following up on these opportunities with the help of the meeting participants.

Presentations from the day will be made available on the event website: https://indico.cern.ch/event/HEPTech_AIME.

Science & Technology Facilities Council

HEPTech

Nodes and Representatives

Location France

Websites http://www.cea.fr/english_portal http://irfu.cea.fr/en/

The CEA is the French Alternative Energies and Atomic Energy Commission (Commissariat à l'énergie atomique et aux énergies alternatives). It is a public body established in October 1945 by General de Gaulle. A leader in research, development and innovation, the CEA mission statement has two main objectives: To become the leading technological research organization in Europe and to ensure that the nuclear deterrent remains effective in the future.

Within CEA, the activities of the Institute of Research into the Fundamental Laws of the Universe (IRFU) cover the fields of astrophysics, nuclear physics, and particle physics.

IRFU's activities are focused on five thematic fields of physics: Ultimate constituents of matter, Energy content of the Universe, Structure formation in the Universe, Structure and evolution of celestial bodies, nuclear matter in extreme states.

Four other key topics cover the development of instruments and the transfer of IRFU's knowledge in the nuclear energy field or other communities:

Innovation for Detector Systems

The activities carried out in this field are about development of detectors, computation and simulation, signal processing and real time systems.

Magnets and Accelerators

These activities cover cryogenic test facilities, new developments for magnet and accelerator instrumentation, particle accelerators and superconducting magnets.

Physics for Nuclear Energy

Basic research in nuclear physics paves the way for new developments in the field of nuclear energy. The teams at IRFU are providing CEA with basic nuclear data; they are also studying the possible transmutation of long-lived nuclear waste, and contributing to projects in nuclear fusion.

Expertise Working for Society

Knowledge and technology developed for basic research prove to be useful in many other fields: dismantling of nuclear installations, development of sophisticated medical imaging tools or climate studies benefit today from the expertise at IRFU.

CEA, Grenoble

Stephan Aune

French Alternative Energies and Atomic Energy Commission (CEA / IRFU)

Project leader on detection system at CEA/IRFU

Co convener of HEPTech detector group

Email: Stephan.aune@cea.fr

Training: Mechanical & Thermal engineer

1993-2003: 10 years experience on CCD camera for Astrophysics - Astroparticle

- Project EROS (Mechanical & Thermal engineer)
- Project Megacam (Mechanical & Thermal engineer, system engineer)

2000-2010: 10 years experience on micromegas detector, project leader for several experiences:

- Project leader of Piccolo micromegas (sealed micromegas detector for nuclear power plant in core neutron flux measurement)
- Project leader of CAST detector (low background micromegas detector for AXION search at CERN)
- Collaboration on various micromegas R&D for other projects

Since 2008-2010:

- Project leader of CLAS12 tracker (low budget material curved micromegas vertex tracker).
- Responsible of the Saclay MPGD workshop (realisation of bulk micromegas R&D & prototypes) and member of RD51 collaboration
- Responsible for the Saclay micromegas bulk technology transfer to industry
- Deputy of the detector integration group (IRFU/LIDA) in Saclay.

Sylviane Zaninotti

Technology Transfer Officer

CEA (Commissariat à l'énergie atomique et aux énergies alternatives)

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Sylviane has been involved in Technology Transfer at CEA since 2005.

Her mission spans from patent portfolio management to establishing and negotiating licenses, with a focus on particle/nuclear physics matter and their related instrumentation.

Before 2005 she worked 4 years as a business manager for a public-sector institution dedicated to economic development. Prior to that she spent 15 years in ICT, networks and information systems, namely as a project manager and group leader.

Sylviane received a Ph.D. in Particle Physics from the University PARIS XI in 1984.

Location Switzerland

Website http://knowledgetransfer.web.cern.ch

CERN's Technology Transfer Office has developed a wide range of technology transfer opportunities, reflecting the needs of its partners and the principles of the Organisation. CERN provides access to its technical expertise and innovative technology for scientific and commercial purposes through a variety of technology transfer opportunities.

R&D Collaborations

Collaborative R&D projects can be developed in CERN's areas of technical expertise, such as superconductivity to ultra-high vacuum, from detectors to ICT. CERN has a well-established tradition of collaboration with companies and research institutes, with the objective to generate technological results having a potential for commercial exploitation.

Service and Consultancy

CERN's expertise and cutting edge infrastructures represent a unique opportunity for companies and academics in need of a specific high-tech service.

Our experts in the many areas of technical excellence are available to provide professional advice or specific studies to your business.

Spin-off Companies

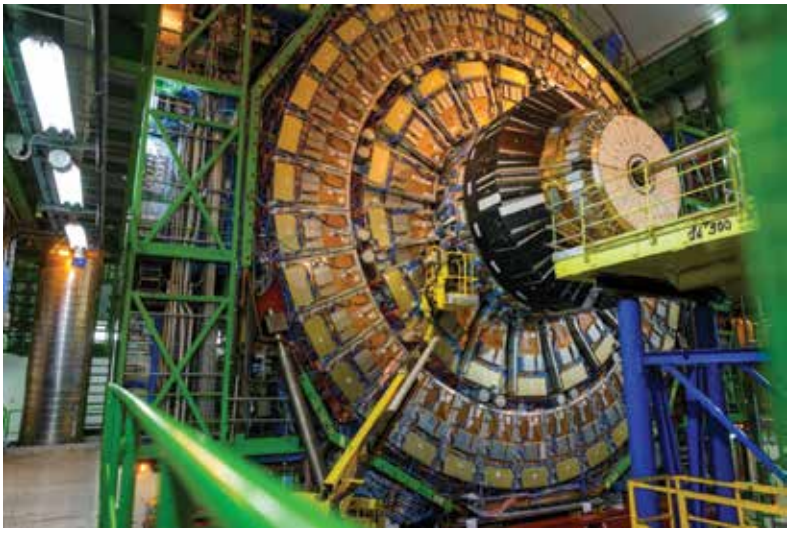
CERN encourages the creation of new companies based on CERN technologies in the Member States.

The creation of spin-off companies is also fostered through incubation centres: In April 2012 CERN and STFC (Science and Technology Facilities Council in the UK) announced the launch of a new Business Incubation Centre at the STFC's Daresbury Science and Innovation Campus.

Licensing

CERN grants licences to commercial and academic partners for the exploitation of its technologies.

A selection of these technologies is available through CERN Easy Access IP, a royalty free licence.



CMS detector open during the LS1

Giovanni Anelli

Head of knowledge transfer group at CERN

European Organization for Nuclear Research (CERN)

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http://www.linkedin.com/pub/giovanni-anelli/1/273/550

Giovanni Anelli was appointed Head of the Knowledge Transfer Group in August 2011.

Giovanni joined CERN's Knowledge Transfer Group in 2010 as Technology Transfer Officer. Before he worked for three years for LEM SA, a company market leader in providing solutions for measuring electrical parameters, where he was managing projects on the design of Integrated Circuits (ICs) for current transducers to be used in industrial and automotive applications. Prior to this, Giovanni worked for 10 years in CERN's Microelectronics Group (Physics Department), where he designed several low-noise low-power analog and mixed signal VLSI circuits for High-Energy Physics applications. His research work also dealt with techniques to design radiation tolerant integrated circuits in deep submicron CMOS technologies, an approach which is now employed by the large majority of the integrated circuits of the Large Hadron Collider (LHC) at CERN.

Giovanni received a M.S. in Electronics Engineering from the Polytechnic of Milan (Italy) in 1997, a Ph.D. in Electronics Engineering (with honors) from the Polytechnic of Grenoble (France) in 2000 and an EMBA from HEC in Paris (France) in 2008. He is author and co-author of more than 70 publications and is an IEEE senior member.

Myriam Ayass

Legal Advisor, Intellectual Property

European Organization for Nuclear Research (CERN)

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Myriam Ayass is Legal Advisor for the Knowledge Transfer Group at CERN, the European Organization for Nuclear Research. She gained her LLM from Queen Mary, University of London, specialising in Intellectual Property Law, and a DEA from the Graduate Institute of International Studies. She joined CERN in 2005 after a period at the WHO, and has been working in the field of technology transfer since that date. As such, she drafts all the Knowledge and Technology contracts of CERN since end of 2005, and generally provides advice on intellectual property issues for the Organization. In this context she became involved in Open Hardware and drafted the CERN Open Hardware Licence. She has also contributed to the definition of HEPTech's IP Charter and to CERN's Policy on the Management of Intellectual Property in Technology Transfer Activities at CERN.

Thierry Lagrange

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Jean-Marie LeGoff

HEPTech Chairman

Physicist

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Jean-Marie Le Goff is a senior applied physics at CERN where he has been working since 1988. He holds a PhD in particle physics and a DPhil in computer sciences.

His first assignment was in the L3 experiment (LEP) where he was first in charge of the optimization of the Z-layers of the muon spectrometer before taking responsibility for the general control system of the experiment.

His second assignment was to lay the foundations of the control system middleware of the LHC experiments in the framework of a DRDC project (RD-38) in collaboration with industry. A major paper manufacturer and utility company in Finland adopted these developments in their industrial control systems.

He then worked on the electromagnetic calorimeter of the CMS experiment where he took charge of the team responsible for the software development dedicated to the tracking and assembly of the detector, including the full characterization of individual parts physics parameters with a view to providing the static calibration data used for the reconstruction of the events in the experiment. This self-described and very versatile software found various applications outside particle physics, in particular in industry as Enterprise Resource Programming (ERP) software and Business Process Management (BPM), and in accounting and finance.

From 2000-2008, Jean-Marie Le Goff was in charge of Technology Transfer. He took a very active role in transferring CERN technologies to industry. The evacuated solar collectors, now equipping Geneva's airport heating and cooling system, the small animal PET system for Drug discovery developed by the Cristal Clear Collaboration (CCC) and an ultra-compact cyclotron for PET isotopes production are among the most important cases he put in place.

During his mandate Jean-Marie Le Goff proposed to the CERN Council the creation of HEPTech, the technology transfer network of institutions in CERN Member States that are active in particle physics, astro-particle physics and nuclear physics that he is currently chairing. He is also the leader of the work package on relation with industry in AIDA, the FP7 project on the development of new detector techniques for future accelerators.

Antonio Pacheco

Technical Trainee, HEPTech Coordination

European Organization for Nuclear Research (CERN)

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pt.linkedin.com/in/antoniodevalladarespacheco

Antonio de Valladares Pacheco joined CERN Knowledge Transfer Group in March 2012. Antonio is a part of the contribution of LIP for HEPTech in collaboration with the Fundação de Ciência e Tecnologia from Portugal. He works as a part of the Coordination of HEPTech and as a part of the KT-Group, helping with the management of Technology Transfer Cases and with responsibilities within the framework of a Technology Transfer Officer.

Antonio finished his M.S. in Technological Physics Engineering at Instituto Superior Técnico of UniversidadeTécnica de Lisboa in 2011. He worked as a scholarship student at Laboratório de Instrumentação e Física de Partículas (LIP) studying particle physics, with a thesis on the “Drell-Yan process simulation in hadronic interactions in the COMPASS experiment” at CERN.

Location France

Website http://www.cnrs.fr/index.php

As the largest fundamental research organization in Europe, CNRS carried out research in all fields of knowledge, through its seven institutes: Institute of Biological Sciences (INSB), Institute of Chemistry (INC), Institute of Ecology and Environment (INEE), Institute for Humanities and Social Sciences (INSHS), Institute for Information Sciences and Technologies (INS2I), Institute for Engineering and Systems Sciences (INSIS), Institute of Physics (INP)and three national institutes:

- National Institute for Mathematical Sciences (INS-MI)
- National Institute of Nuclear and Particle Physics (IN2P3)
- National Institute for Earth Sciences and Astronomy (INSU)

CNRS encourages collaboration between specialists from different disciplines in particular with the university thus opening up new fields of enquiry to meet social and economic needs. CNRS has developed interdisciplinary programs which bring together various CNRS departments as well as other research institutions and industry.

Interdisciplinary research is undertaken in the following domains:

- Life and its social implications
- Information, communication and knowledge
- Environment, energy and sustainable development
- Nanosciences, nanotechnologies, materials
- Astroparticles: from particles to the Universe

Loic Bordais

Responsable Valorisation et partenariats industriels

CNRS IN2P3 (May 2011 – April 2013)

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fr.linkedin.com/pub/loic-bordais/10/156/243/

Specialities: Innovation, development of public research, entrepreneurship, technology transfer, strategic analysis, management teams

Economic exploitation of research

Loic has knowledge and expertise in all aspects of the economic value of public research: engineering innovative projects (detection, maturation, marketing positioning, licensing) IP, networking, advice laboratories, technological, training

Innovative management and entrepreneurship

Graduate in business management (EDHEC 1990), Loic created and led an innovative technology company JUCANN TECH, Loic advised INRA and CNRS researchers in assembling companies under the statutory framework.

Good knowledge of public research

Loic's experience at CNRS and INRA gives him a good understanding of research organizations, the lives of laboratories, regulatory, financing methods, and relationships with government departments and political bodies.

The animation industry research networks

Loic created and conducted various activities in the communication to businesses and the creation of research networks and industry meetings, especially SMEs.

Recent Experience

Responsable programmes FNV et IEED - Agence nationale de la recherche

May 2013 – Present (4 months)Paris

Responsable Valorisation et partenariats industriels - CNRS IN2P3

May 2011 – April 2013 (2 years)Paris Area, France

Location Spain

Website http://www.i-cpan.es/index.php?Idioma=en

CPAN is the Spanish national centre for particle, astroparticle and Nuclear Physics –it aims to actively promote the coordinated participation of the Spanish scientific groups in cutting edge research in particle physics, astroparticle and nuclear physics and enhance the visibility of member groups, reinforce their international competitiveness and ensure a critical mass, while optimizing available resources.

CPAN coordinate the activities of participating groups, supporting them in major projects and international initiatives. Contributing to providing technical personnel and the know-how needed to deal competitively in the international scientific environment of technological developments for future experiments, both those already approved (as the LHC, FAIR, MAGIC, ANTARES, Auger South, etc.) and those which are under R & D (such as ILC, KM3, CTA, or EURISOL Auger North, for example) or even future projects that require it.

CPAN also promote R & D activities that support young scientists and technical staff ensuring that there is an appropriate transfer of technological knowledge for companies, supporting scientific dissemination and training activities.

Kiko Albiol

Researcher IFIC (CPAN)

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PhD Particle physics. From 1993 to 1998 I worked at CERN, Liverpool University and Valencia on the development of particle detectors for High Energy Physics. These developments were carried using silicon strips detectors.

In 1998 I co-founded a consulting enterprise, to perform developments in Open-Source, and I+D+i projects involving signal processing including imaging, data processing, and in house developments.

CTO At Sertecnet SL, and President of the Integralia non profit association.

CISA certification in IT auditing (http://www.isaca.org)

Lot's of applications and product development carried, funded and commercialized in the private sector, an licenses carried within the industry.

From 2006 to 2009 I've been involved as medical physics programing consultor.

Involved in the development of radio therapy planning systems including FDA certification.

From 2010 I started working in the Deputy Vice-Presidency for Knowledge Transfer Spanish National - Research Council (CSIC) - Valencia Community Delegation CSIC Main areas:

- Project manager in (I+D+i) involving vision and final product.
- Automatization and system optimization
- Auditing and IT Consulting.
- Patent and IP experience.

Started in 2013 Working in research I+D+I at IFIC

DEMOKRITOS

NATIONAL CENTER FOR SCIENTIFIC RESEARCH

Location Greece

Website http://www.demokritos.gr/

Demokritos, Greece

'Our mission is to further augment Research Excellence and to promote innovation and technology transfer'

NCSR "Demokritos", the largest multidisciplinary research centre of the country hosts significant scientific research, technological development and educational activities, coordinated by eight Institutes. The centres internationally distinguished scientific personnel utilise a number of unique Greek research infrastructures, working diligently towards scientific excellence, technological innovation and education. Moreover intensive efforts are directed towards the interconnection of technology and innovation. Through the combination of effective research administration and scientific management NCSR "Demokritos" promotes scientific research and technological development at a large scale and ranks among the top research centres in Greece and Europe. In this manner, the scientific publications of scientists from NCSR "D" account for 35% of all publications produced by Greek research centres on an annual basis.

Michele Barone

Industry Liaison Officer and Technology Transfer Officer for Greece at CERN

Demokritos, Greece

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http://www.inp.demokritos.gr/web2/?page_id=406&page=1&user=Barone-Michele

Michele Barone graduated in experimental physics at the University of Bari, Italy.

Following experimental work at CERN with the Division-Group C.Rubbia, he held teaching and research positions in Switzerland, Italy(Universita' di Perugia, INFN-National Laboratory of Frascati) and Greece(Institute of Nuclear Physics at National Scientific Research Center-Demokritos and University of Athens).His interest in experimental work led to managerial positions in international companies manufacturing systems for medical and scientific research. Dr.Barone is currently member of the Compact Muon Solenoid Collaboration and is acting as Industry Liaison Officer and Technology Transfer Officer for Greece at CERN. He is author of some 150 papers and organizer of several international congresses and conferences.

Location Germany

Website http://www.desy.de/index_eng.html

DESY - Deutsches Elektronen-Synchrotron, is one of the world's leading accelerator centres and a member of the Helmholtz Association. DESY develops, builds and operates large particle accelerators used to investigate the structure of matter. DESY offers a broad research spectrum of international standing focusing on three main areas: accelerator development, construction and operation; photon science; particle and astroparticle physics.

Thanks to its expertise and worlwide unique diversity of excellent light sources, DESY is a very attractive venue for more than 3000 scientists from over 40 countries a year, and a sought-after partner in national and international cooperations and projects. The DESY research programme is not restricted to the facilities at its two locations in Hamburg and Zeuthen. DESY is closely involved in a number of major international projects, including the X-ray laser European XFEL in Hamburg and Schleswig-Holstein, the Large Hadron Collider LHC in Geneva, the neutrino telescope IceCube at the South Pole and the International Linear Collider ILC.

Petra Halle, DESY

Katja Kroschewski

Head of Technology Transfer Office

Deutsches Elektronen-Synchrotron (DESY)

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After having studied at IMS Stuttgart (Institute for Natural Language Processing) and UC Berkeley Katja Kroschewski received her diploma degree in Computational Linguistics in 1996 and joined directly the Institute for Natural Language Processing at the University of Stuttgart as a research assistant for seven months. She then switched to the language Services of Daimler AG in 1997. There she was responsible for machine translation and translation memory projects between May 1997 and September 2003. As she had moved to Hamburg with her family in 2001 she left Daimler AG in October 2003, when she became the executive director of CompCat Software und IT-Lösungen GmbH (CompCat Software and IT Solutions Co.) and kept working freelance for Daimler Chrysler.

In November 2007 she joined DESY as a team member of DESY's TT office marketing synchrotron radiation and working for the EU ERID-watch project. Within this project she carried out a case study on industrial usage of synchrotron radiation across Europe.

Since December 2009 Katja Kroschewski has been head of DESY's technology transfer office, which is responsible for patenting, licensing, industry contracts, sponsoring, assistance for spin-offs as well as utilization and marketing of technologies and services.

Location Czech Republic

Website www.eli-beams.eu, www.citt.cz

ELI Beamlines is the Czech part of the Extreme Light Infrastructure (ELI) project, which is a part of the European roadmap of next-generation major research facilities that have been identified by the European Strategic Forum for Research Infrastructures (ESFRI).

From 2017, ELI will be a fully operational international research infrastructure based on an open access policy using cutting-edge laser technologies to generate ultrashort light pulses with intensity up to 10 PW lasting a few femtoseconds. The ELI mission will be both fundamental academic research as well as applied research with direct societal impact.

The primary mission of the ELI Beamlines will consist of producing an entirely new generation of secondary sources driven by ultra-intense lasers. These secondary sources will produce pulses of radiation and particles such as flashes of XUV, X-rays and gamma-rays, bunches of accelerated electrons, protons and ions, etc., exploitable as qualitatively new tools in many research disciplines and in the development of new technologies.

The research programmes (RP) of the ELI project are structured in the following way:

RP1: Lasers generating repetition-rate ultrashort pulses and multi-petawatt peak powers

RP 2: X-ray sources driven by ultrashort laser pulses

RP 3: Particle acceleration by lasers

RP 4: Applications in molecular, biomedical, and material sciences

RP 5: Plasma and high energy density physics

RP 6: Exotic physics and theory

ELI Beamlines

Aleš Hála

Head of Centre for Innovation and Technology Transfer for projects ELI Beamlines & HiLASE

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Aleš joined the ELI Beamlines project in July 2011. Since the beginning of his engagement at ELI Beamlines, his major objective has been the creation of a solid technology transfer platform for laser projects ELI Beamlines and HiLASE. His team is involved mainly in technology prior art searches, patenting processes, supporting contract and collaborative research and delivering legal and business consultancy support to its fellow researchers.

Aleš started his professional career in 2002 in CzechInvest working with multinational companies in the electronics and semiconductor industries. Later, he lead the CzechAccelerator project identifying financial and development opportunities for technology driven start-up companies in the USA and other world destinations.

ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

Location Switzerland

Website http://www.epfl.ch

EPFL (Ecole Polytechnique Fédérale de Lausanne) is one of two Swiss Federal Institutes of Technology. Like its sister institution, ETHZ, it has three missions: education, research and technology transfer at the highest international level.

Located on the shores of Lake Geneva, EPFL is Europe's most cosmopolitan technical university. It receives students, professors and staff from over 120 nationalities. With both a Swiss and international calling, it is therefore guided by a constant wish to open up its missions of teaching, research and partnership impact to various circles: universities and engineering schools, developing and emerging countries, secondary schools and gymnasiums, industry and economy, political circles and the general public.

With over 350 laboratories and research groups on campus and its unique structure, EPFL fosters trans-disciplinary research and promotes partnerships with other institutions and companies. It continuously combines fundamental research and engineering.

Gabriel Clerc

Head of the Technology Transfer Office

Ecole Polytechnique Federale De Lausanne (EPFL)

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Mechanical engineer of the Swiss Federal Institute of Technology in Lausanne (EPFL) with specialization in applied thermodynamics and turbo-machinery. 1978-1979, research and development engineer in the central R&D department of SULZER Co, Switzerland with activities in new products and systems in the fields of applied thermodynamics and materials. 1979-1988, experimental test pilot at the Swiss federal aircraft factory with numerous test flights and evaluations experiences mainly on fighter jets. One year of specialized training in this field in the US (USNTPS).

Since 1988, research contracts officer and licensing officer at the Swiss Federal Institute of Technology in Lausanne (EPFL). Head of the Technology Transfer Office of EPFL (TTO) since its creation in 1998, the technology transfer and industrial research contracts office of EPFL. Contributions during many years to the development of the science park on EPFL campus as well as to the foundation for technological innovation (FIT) which supports financially early stage start-up projects with pre-seed loans.

Member of AUTM (Association of university technology managers, USA) and ASTP (Association of European science and technology transfer professionals).

Co-founder and past president of the Swiss technology transfer association swiTT (association of Swiss transfer professionals working for universities, federal institutes of technology and public higher education and research institutions).

Andrea Crottini

Technology Transfer Manager

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Andrea is technology transfer manager at the Technology Transfer Office of EPFL since 2011. His main mission is licensing technologies in engineering and physics.

Prior to that, Andrea worked in the field of optical sensors at IMT in Neuchâtel (CH), lasers and amplifiers at the Alcatel research center in Marcoussis (F), and instrumentation for traces analysis in liquids at Hach-Lange (Danaher Corp.)

Andrea graduated in Physics from the University of Milan (I) in 1996, and obtained a PhD degree in optics and spectroscopy at EPFL in 2001.

Location Lund (Sweden)

Website http://www.europeanspallationsource.se

The European Spallation Source (ESS) is a multi-disciplinary research centre based on the world's most powerful neutron source. ESS will be around 30 times brighter than today's leading facilities, enabling new opportunities for researchers in the fields of life sciences, energy, environmental technology, cultural heritage and fundamental physics. Their vision is to maximise the impact of our knowledge, skills, facilities and resources for the benefit of industry and society.

The European Spallation Source is one of the largest science and technology infrastructure projects being built today. The facility design and construction includes a linear proton accelerator, a heavy-metal target station, state-of-the-art neutron instruments, a suite of laboratories, and a supercomputing data management and software development center.

The European Spallation Source is a pan-European project. It will be built by at least 17 European countries, with Sweden and Denmark as host nations. The ESS facility will be built in Lund, whilst the ESS Data Management and Software Centre Centre will be located in Copenhagen. Around two to three thousand guest researchers will carry out experiments at ESS each year.

Under the lead of Juan Tomás Hernani, five strategies, depicted in the IIP pentagon, have been developed which have at their centre the knowledge and intellectual property generated by ESS, and represent its corresponding technology transfer actions.

These five strategies are; the Spin-Off Programme to foster business development generated from design, construction, and operation of ESS, the People Flow Programme to give the opportunity for scientists and engineers to temporarily work at ESS, an Industrial Advisory Panel to raise awareness of ESS amongst top-level industry decision makers in Europe, the Industry of Science Strategy to seek new funds through public R&D calls, where new prototypes, upgrades, and technology can be developed in collaboration with scientific industrial partners.

Of particular interest for the Member States will be the Industry Liaison Offices Network that will be established soon. Appointed by their national governments, and hosted by a national institution, each ILO will be the main point of contact between Industry and ESS at the member-state level.

Ute Gunsenheimer

HEPTech: Representative of ESS

European Spallation Source: Head of Innovation

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Ute Gunsenheimer joined ESS as Head of Innovation in the team of Juan Tomás Hernani in November 2012. Under his guidance she has built up the Innovation and Industry Division at ESS, which implements the organisation's innovation policy. Its aim is to identify and capitalize on potential innovations generated by the operation of the facility, in the long run, and through the construction of the infrastructure itself, in the short term.

Ute has several years of experience in managing large teams in business environments. She was managing director of a Berlin based international communications agency with clients from almost all of the different General Directorates of the European Commission as well as other European institutions.

Juan Tomás Hernani

HEPTech: Representative of ESS

European Spallation Source: Secretary General for Innovation and Industry

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Email: juantomas.hernani@esss.se

Juan Tomás Hernani joined ESS as Secretary General for Innovation and Industry in February 2012. Before he was the General Secretary for Innovation within Spain's Ministry of Science and Innovation from April 2009 to January 2012 and the President of CDTI during 2008 and 2009 years. He is an Industrial Engineer from the University of Bilbao; he is an economist and also hosts a Master of Science in advanced manufacturing from the Cranfield Institute of Technology (UK). Within the Ministry, he has been President of The Genoma Foundation, President of DDI and Vicepresident and General Manager of the Foundation for Science and Technology, FECYT.

He has more than 17 years of experience acting as General Director of various companies. He was the founder and CEO of KEON AZERTIA, a leading IT company specialized in the field of document processing. He was also General Manager of ISABEL (Conservas Gravilla). These activities were coached by the BBVA industrial group, where Mr Hernani worked for 11 years. He has extensive experience as Chairman and Board Member of a number of companies operating in the fields of Information Technology, Food, Fashion and Design, Biotechnology and Real State. He was Technical Director of Robotiker Research Centre. He has also worked at Hewlett Packard and the 'Ente Vasco de la Energia'.

He has been Secretary of the Foundation Metalingua-Unesco and he has been professor of marketing and e-business at the Finance School of the BBVA, in the University of Deusto and the University of the Basque Country.

Location Germany

Website http://www.gsi.de/en/about_us.htm

GSI- operates a worldwide unique large-scale accelerator facility for heavy ions and currently employs about 1,100 people. In addition approximately 1,000 researchers from universities and other research institutes around the world use the facility for their experiments.

GSI is a limited liability company (Ger. GmbH). Associates are the German Federal Government (90 per cent), the State of Hessen (8 per cent), the State of Rhineland-Palatinate (1 per cent) and the Free State of Thuringia (1 per cent). They are represented in the board of directors by the Federal Ministry of Education and Research and the respective Ministries. GSI is a member of the Helmholtz Association, Germany's largest research organisation.

The best-known results are the discovery of six new chemical elements and the development of a new type of tumor therapy using ion beams.

Currently the international accelerator center called FAIR (Facility for Antiproton and Ion Research) – one of the largest research projects in the world – is being built adjacent to GSI.

GSI Facility, Darmstadt

Björn Offermann

GSI Helmholtzzentrum für Schwerionenforschung

Email: B.Offermann@gsi.de

Björn studied advertising in Stuttgart and worked afterwards in a full-service advertising agency in Stuttgart. After a trip through Australia, Björn studied business administration with a focus on marketing and media management at the University of Siegen. Within this study Björn spent one semester abroad in Australia where he studied creative thinking at the Edith Cowan University. Björn finished his studies in Geneva at CERN where he wrote his master thesis (Innovation capability at CERN: A process-oriented conceptualization and measurement). Today he works at GSI in the TT department and writes his doctoral thesis with the objective to develop a holistic concept for technology transfer in high energy physics.

Dorothee Rück

Physicist, European Patent Attorney

GSI Helmholtzzentrum für Schwerionenforschung

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Dorothee M. Rück is an educated physicist with key aspects of activity in nuclear physics, solid state physics and ion source development in the field of accelerator technologies. She got her qualification as European Patent Attorney in 2009 and is head of the department of "Intellectual Property (IP9 and Technology transfer" at the GSI Helmholtzcenter for Heavy Ion Research in Darmstadt.

Her activities span beside managing the department mainly all duties and activities including patent drafting, all kind of office actions with national and international patent office, license negotiations and license contracting. She is member of the Institute of Professional Representatives before the European Patent Office (EPI), the German national patent organizations VPP and GRUR as well as the Deutsche Physikalische Gesellschaft (DPG).

She was director of a Steinbeiss Tranfer Center of surface Modifications with the aim and activity of transferring surface treatment technologies from research to business. Herein she worked together with companies in the tool- industry and industry for medical parts and tooling as well as textile machine companies like spinning machine companies.

Location Slovenia

Website http://www.ijs.si/ijsw/JSI

The Jozef Stefan Institute (JSI), founded in 1949, is the leading Slovenian scientific research institute, covering a broad spectrum of basic and applied research. The staff of more than 930 specializes in natural sciences, life sciences and engineering. The main subjects concern physics, chemistry, biochemistry, new materials and nanotechnology, electronics, information and communication technology, reactor techniques and energetics, nuclear engineering and environmental technologies. The basic goals of the JSI are to provide expert scientific and applied output in the form of processes, products and consultancy, and to produce well-trained young scientists.

JSI is building strong links to universities, other research institutions and industry. In the last year the Institute was involved in 248 international projects, 98 were within the EU framework projects.

Today JSI co-operates with many leading scientific research institutions world-wide, such as Joanneum Research, the leading Austrian technological institute and Korean Basic Science Institute. For example, close collaboration with the University Medical Centre has resulted in the development of medical equipment (tomography, electrical stimulators and appliances), the provision of isotopes for clinical research and treatment of patients, and the introduction of new research techniques and diagnostic methods into clinical medicine.

JSI devotes a considerable amount of effort to transferring the results of its research and knowledge to productive applications and to the market. A Technology Park established by JSI was an predecessor of the Ljubljana Technology Park, which today brings together over 290 companies.

The Park supports creation and growth of new enterprises based on the results of research from Slovenian universities and international institutes. Their products, technologies and services have been developed within research or application projects over the past few years. JSI actively makes use of this support for hi-tech enterprises to create an environment in which innovation, financing and production interact to accelerate the cycle of development of innovative products.

Špela Stres

Head of Center for Technology Transfer and Innovation and the Joint office for technology transfer of the JSI and the National Institute of Chemistry

The Jožef Stefan Institute (JSI)

Contact: Jamova cesta 39, 1000 Ljubljana, Slovenia

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Špela Stres holds a PhD in Physics and a LLM Master of Laws. She is currently active as: Head of Center for Technology Transfer and Innovation and the Joint office for technology transfer of the Jožef Stefan Institute and the National Institute of Chemistry; President and founder of Slovenian Association of Science and Technology Professionals, SI-TT; Slovenian representative in Steering Committee and Board member of the CERN TT Network, Geneva, Switzerland; and Vice President of Association of Science and Technology Professionals (ASTP), Hague, Netherlands.

NEUTRONS FOR SCIENCE®

Location France

Website http://www.ill.eu http://www.ill.eu/industry

Unique Facilities and Cutting-Edge Expertise

The Institut Laue-Langevin is an international research centre at the leading edge of neutron science and technology.

As the world's flagship centre for neutron science, the ILL provides scientists with a very high flux of neutrons feeding some 40 state-of-the-art instruments, which are constantly being developed and upgraded.

As a service institute the ILL makes its facilities and expertise available to visiting scientists. Every year, some 1500 researchers from over 40 countries visit the ILL. With more than 800 experiments performed annually. Research focuses primarily on fundamental science in a variety of fields: condensed matter physics, chemistry, biology, nuclear physics and materials science, etc.

All the scientists at the ILL - chemists, physicists, biologists, crystallographers, specialists in magnetism and nuclear physics - are also experts in neutron research and technology and their combined know-how is made available to the scientific community.

ILL is funded and managed by France, Germany and the United Kingdom, in partnership with 11 other countries.

A Unique and Versatile Portfolio of Research Solutions

To develop new materials and industrial processes, to control emerging technologies or explore future avenues of research, many major companies have been turning to the ILL's specialised facilities, which provide a cost-effective response for rapid and efficient R&D.

Many of the research proposals submitted to ILL are related to industrial R&D. ILL encourages industrial research teams to submit proposals on scientific collaboration using its unique instrumentation. Consultancy expertise can also be arranged via ILL's own scientists and the international user community.

ILL's instrumentation and scientific expertise are available for R&D across a broad range of applications. We have something to offer to all sectors of industry, from nuclear power through chemicals and pharmaceuticals to advanced engineering.

Xavier Thibault

Head of the Business Development Office

ILL : Institut Max Von Laue Paul Langevin

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Email: thibault@ill.eu

Xavier created the Business Development Office of the ILL in 2010.

His mission spans from IP and licensing to R&D partnership and contracts, with the aim to show the impact of the research performed at the ILL on the economy and the society.

Before 2010 he worked 8 years as scientist for the European Synchrotron Radiation Facility. All the projects, he managed were linked with the industry.

Xavier received a Ph.D. in Process Engineering from the Grenoble Institut National Polytechnique in 2001.

Location Romania

Website http://www.nipne.ro

The “Horia Hulubei” National Institute of Physics and Nuclear Engineering (IFIN-HH) is standing at the forefront of Romanian science both in terms of research infrastructures and research personnel, providing over 10% of the national scientific output. Following the tradition initiated by the founder Professor Horia Hulubei, the IFIN-HH addresses a wide spectrum of research and development activities in fundamental and applied research areas including Nuclear Physics and Astrophysics, Particle Physics, Atomic Physics, Life and Environmental Physics, Theoretical Physics, Nuclear Techniques, and Advanced Communication Systems.

The IFIN-HH has a staff of 688 employees, which include 307 R&D personnel, 235 PhD and 21 PhD advisors. This makes the IFIN-HH fully compliant with the political, scientific, and managerial requirements prevailing in the European space. To turn its strength to the best account, the institute concentrates its resources in two areas: (a) to steadily develop a sound in-house capability to get to and stay at the forefront of nuclear science and technology; and (b) to substantively participate in the European collaborative endeavors centered on Large Scale Facilities such as GSI-Darmstadt (Germany), GANIL-Caen (France), CERN (Geneva), JINR (Dubna).

The IFIN-HH will continue to develop its infrastructure, manpower, and expertise. Bringing bright young people at the frontiers of Science and blending their enthusiasm with the experience and educated tenacity of the elders, is believed to be a sure recipe for the long-term sustainability of the IFIN-HH activities.

In line with this, the IFIN-HH is leading the realization of the Extreme Light Infrastructure – Nuclear Physics (ELI-NP), the Romanian research centre part of the European distributed infrastructure ELI. This will be based on two main pieces of research equipment, a laser system that will produce two 10PW beams, and a gamma beam system that will produce highly collimated, high intensity gamma radiation with tunable energy up to 20MeV. Using at the same time both high intensity gamma and laser beams, the materials behaviour in extreme radiation conditions will be studied.

Cristian Cristescu

Head of Center for Technological Transfer and Marketing – from January 2013

"Horia Hulubei" National Institute of Physics and Nuclear Engineering

Contact: 30, Reactorului St, Bucharest-Magurele City, Ilfov County

Romania

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Email: cristian.cristescu@nipne.ro

Cristian has an International Business background being an excellent networker with a large pool of well-connected associates and business partners from Romania and worldwide. With both vision and diligence, he is very reliable, and more important, a very creditable partner to work with. His attention to detail is impressive to everyone who has worked with him.

He graduated in Electronics and Telecommunication from Politechnical Institute of Bucharest in Romania having an MSc in Digital Integrated Circuits & Microprocessors Designing.

Dan Enache

Director Center for Technology Transfer and Marketing – IFIN-HH

ro.linkedin.com/pub/dan-enache/18/2b6/92

Business consultant and business liaison for companies willing to start up and/or develop their business in Romania

Specialities: business administration, international economic relations, foreign trade

Experience

Secretary of State for SME's, business environment and tourism- Ministry of Economy of Romania

February 2013 – Present (7 months)Bucharest

Director Center for Technology Transfer and Marketing - Horia Hulubei National Institute of Physics and Nuclear Engineering

November 2011 – Present (1 year 10 months)
Magurele, Romania

Location Italy

Website http://www.infn.it/index.php?lang=en

The Istituto Nazionale di Fisica Nucleare (INFN) (National Institute for Nuclear Physics) is the coordinating institution for nuclear, particle and astroparticle physics in Italy. It was founded on 8 August 1951, to further the nuclear physics research tradition initiated by Enrico Fermi in Rome, in the 1930s. The INFN collaborates with CERN, Fermilab and various other laboratories in the world. In recent years it has provided important contributions to Grid computing.

During the latter half of the 1950s, the Istituto Nazionale di Fisica Nucleare designed and constructed the first Italian accelerator—the electron synchrotron developed in Frascati. In the early 1960s, it also constructed in Frascati the first ever electron-positron collider (ADA - Anello Di Accumulazione), under the scientific leadership of Bruno Touschek.[1] In 1968, the Frascati began operating ADONE (big AdA), which was the first high-energy particle collider, having a beam energy of 1.5 GeV.[2][3] During the same period, the INFN began to participate in research into the construction and use of ever-more powerful accelerators being conducted at CERN.

The INFN has Sezioni (Sections) in most major Italian Universities, and 4 National Laboratories. It has personnel of its own, but it is mostly the main funding agency for high-energy physics in Italy. University personnel can be affiliated with INFN and receive from it research grants.

Location Prague, Czech Republic

Website http://www.inovacentrum.cvut.cz/main/en

Inovacentrum CTU is a university center for cooperation with companies in the Czech Republic and abroad. Inovacentrum provides comprehensive services to everybody wanting to use the expert knowledge and services available at the oldest and most prestigious Czech technical university. Inovacentrum has 30 employees in 6 departments and offers the following services: customized research and development, technology sales, access to experts, use of specialized laboratories and test rooms, organization of round table discussions and conferences, student internships and grant advisory services and grant administration. Inovacentrum also manages InovaJET, a business incubator with around 24 innovative start-up companies every year.

Jaroslav Burcik

Director

CVUT Inovacentrum

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Email: burcik@inovacentrum.cvut.cz

Jaroslav Burčík graduated from the Faculty of Electrical Engineering at the Czech Technical University in Prague (CTU). In 2005 he initiated a project called Tripod aiming to develop and enhance innovative business and technology transfer at the university. After the establishment of the Centre for cooperation with industry at the Faculty of Electrical Engineering and in December 2009 he was appointed director of the Technology and Innovation Centre of CTU. These two centres were united in 2011 and Inovacentrum CTU was established, providing services for the whole university. Today Inovacentrum has 30 employees.

Location Portugal

Website http://www.lip.pt/

LIP is a scientific and technical association of public utility that has for goal the research in the fields of Experimental High Energy Physics and Associated Instrumentation.

LIP's research domains have grown to encompass Experimental High Energy Physics and Astroparticles, radiation detection instrumentation, data acquisition and data processing, advanced computing and applications to other fields, in particular Medical Physics.

The main research activities of the lab are developed in the framework of large collaborations at CERN and at other international organizations and large facilities in Europe and elsewhere, such as ESA, SNOLAB, GSI, NASA, AUGER and LUX.

LIP is an "associated laboratory" assessed as "Excellent" in three successive evaluations by international panels.

In its three laboratories in Coimbra, Lisbon and Minho, LIP has about 170 people, out of which 70 hold a PhD degree, and many are professors at the local universities.

Emir Sirage

Coordinator Technology Office at Portuguese Foundation for Science and Technology - FCT

Email: Emir.Sirage@fct.pt

http://www.linkedin.com/profile/view?id=1550772&locale=en_US&trk=tyah2

Education

2012/2013: Master´s Degree, Management of Information Systems

2011/2012: Post-Graduate, Information Technology and Systems for Organizations

2007: Executive MBA in Management of Technology

2004: Post-Graduate, Management of Technology

2002: Master´s Degree, Engineering and Industrial Management

Experience

2013 – Present: Coordinator of Technology Office at Portuguese Foundation for Science and Technology, Ministry of Education & Science

- Management of international science-industry programmes: International Partnerships (MIT, CMU, UTAustin, Harvard Medical School and Fraunhofer Institute); Industrial R&D (Eureka, Eurostars) and Technology Transfer (PTTI - Portuguese Technology Transfer Initiative)

2011 – Present: Portuguese Delegate at ERAC, Group on Knowledge Transfer (KT)

2009 – Present: Industrial Liaison Officer for CERN, ESO, ESRF and Industrial Policy Committee (IPC) Delegate for ESA

2010 – 2012: Executive Committee member at the Portuguese University Technology Enterprise Network (UTEN)

2003 – 2009: Technology Transfer Officer at CERN

2002 – 2003: Consultant for SMEs in Portugal

Location Greece

Website http://www.ntua.gr/org_en.html

The National Technical University of Athens (NTUA) is the oldest and most prestigious educational institution of Greece in the field of science and technology, and has contributed unceasingly to the country's scientific, technical and economic development since its foundation in 1836. It is closely linked with Greece's struggle for independence, democracy and social progress. In Greek, NTUA is called the "Ethnicon Metsovion Polytechnion" which stands for National Metsovion Polytechnic. It was named "Metsovion" to honor the donors and benefactors from Metsovo, a small town in the region of Epirus, who made substantial donations in the last half of the 19th century.

The Senate supervises the overall Institution's function in compliance with the state laws as the Institution's internal regulations. It forms the NTUA educational and research policy, its strategic planning development, and reports on its regular activities. Moreover, it is in close cooperation with various Greek and foreign Universities, as well as other scientific and cultural institutions.

Evangelos Gazis

NTUA-TTO

Professor of Experimental Particle Physics

National Technical University of Athens

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Email: egazis@central.ntua.gr

1982-Today: Professor of Particle Physics, School of Applied Mathematical & Physical Sciences, Physics Department, NTUAthens

2008-2007: Visiting Professor, Physics Department, University of Lund, Sweden,

2009-1010: Guest Professor, ATLAS Collaboration, PH-Department, CERN

Research participation to nuclear, particle and astro-particle physics, detector construction, accelerator R&D and detector control systems

Supervisor and external examiner to many PhD candidates

Location Switzerland

Website http://www.psi.ch

The Paul Scherrer Institute, PSI, is the largest research centre for natural and engineering sciences within Switzerland, with its research activities concentrated on three main subject areas: Matter and Material, Energy and the Environment, and Health. The PSI develops, constructs and operates complex large-scale research facilities.

Researchers in the area of Matter and Material study the internal structure of a wide range of different materials. Results contribute towards a better understanding of processes occurring in nature and provide starting points in the development of new materials for technical applications.

The goal of activities in the Energy and Environment area is to develop new technologies to facilitate the creation of a sustainable and secure supply of energy, as well as an uncontaminated environment.

In the Health area, researchers are searching for the causes of illnesses, and exploring potential treatment methods. Their basic research activities also include the clarification of generic processes in living organisms.

PSI operates large scientific research facilities, such as the SINQ neutron source, the Swiss Light Source (SLS) and the SμS muon source, which offer out-of-the-ordinary insights into the processes taking place in the interior of different substances and materials. These are the only such facilities within Switzerland, and some are the only ones in the world.

PSI also provides access to their large research facilities via a User Service to researchers from universities, to industry. In 2011, more than 2300 external researchers carried out measurements at the approximately 40 measuring stations of these large-scale research facilities.

In addition to its research activities, the Institute operates Switzerland's sole facility for the treatment of specific malignant tumors using protons. This particularly sensitive procedure allows tumors to be destroyed in a targeted manner, leaving the surrounding tissue largely undamaged.

Robert Rudolph

Mitglied der Geschäftsleitung / Innovation & Bildung at Swissmem

ch.linkedin.com/in/rudolph

Know-how and experience in the following fields:

- Technology transfer and licensing
- Intellectual property management
- Methods and tools in innovations and technology management
- Definition and application of innovation process, enterprise portal, management tools for R&D
- Product and process technologies used at SIG, specifically: Injection molding and assembly, beverage filling, aseptic technologies in filling, bottle labelling, beverage carton system, stretch-blow molding of PET containers, oxygen barrier technologies for plastics.

Specialities: Definition and implementation of innovations, technology and knowledge management tools. Experience with large projects with several internal and external parties involved. Definition and application of IT-based tools in R&D and quality management.

The Paul Scherrer Institut (PSI) has initiated a project to establish a high-tech zone to be integrated into the PSI campus offering technology companies excellent opportunities to benefit from PSI's renowned world class research in various fields.

Experience

Member of the Executive Board / Education & Innovation- Swissmem

March 2012 – Present (1 year 6 months)Zürich

Member of selection committee- Genilem Aargau

January 2010 – Present (3 years 8 months)

Member of the Board- DECTRIS AG

September 2006 – May 2012 (5 years 9 months)

Co-Project Manager- Project Hightech-Zone Villigen

June 2008 – February 2012 (3 years 9 months)

Head of Technology Transfer - Paul Scherrer Institut

August 2005 – February 2012 (6 years 7 months)

Location Bulgaria

Websites http://nis-su.uni-sofia.bg/ http://tto.bg/Default_en.aspx

The Scientific Research Centre (NIS) at Sofia University "St. Kliment Ohridski" is the department responsible for administration and support of the research and project activities on a contract basis.

Annually, NIS administrates over 300 project contracts with a total value of about 10 Mio BGN. Projects are funded on a contract basis by the National Research Fund (60%), the EC Programmes (30%), and by the industry. Over 500 researchers, mainly from the academic staff of Sofia University and 93 specialists from NIS take part in these activities.

The research activities carried out through the Scientific Research Centre range over almost all fields of natural and social science. The main directions of scientific research are concentrated in: nanotechnologies and new materials, information and communication technologies, microbiology, quantum electronics and laser technology, thermodynamics of surface and disperse systems, ecology and environment protection, biology and biological resources, education, and cultural heritage.

The Scientific Research Centre operates in the follows areas:

- Provides administrative and financial services of projects;
- Performs project financial management and reporting;
- Provides support in project proposal development;
- Provides information about funding opportunities;
- Supports technology transfer;
- Provides consultancy in IPR issues;
- Performs training in commercialization of research results;
- Maintains web sites and data bases about projects and results;
- Produces electronic monthly newsletter, on-line journal of academic research publications, Yearbook of research project results, and promotional materials;
- Serves as a National Industry liaison office of CERN;
- Participates in international research and technology transfer networks.

At present, the Scientific and Research Centre is member of the Association of European Science & Technology Transfer Professionals and of the HEPTech Network.

Bojil Dobrev

Director

Scientific Research Centre (SRC) at Sofia University “St. Kliment Ohridski”

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Born 1949 in Sofia. Graduated the Technical University, Sofia. Twenty years’ experience in Information technologies research, development and management and 15 years’ experience in delivering and management of business education. Participation in several international projects including IST projects as EMunIS (2001-2003) as Regional Coordinator and e-Inclusion (2005), e-Business W@tch(2006) and Knowledge and Technology Transfer (2011) as National correspondent, e-Government strategy and promotion in BG(2012).

Since 1992 Academic Director of International University, Sofia. Since 2009 Director of the Research Center at Sofia University and the Technology Transfer Office. Author of more than 60 publications and a book “Guidelines for e-Government” (2005).

Eleonora Getsova

Head of the Information Provision Unit at the SRC

CERN ILO for Bulgaria at Sofia University

Scientific Research Centre (SRC) at Sofia University "St. Kliment Ohridski"

Contact: Technology Transfer Office, SRC, Sofia University, Faculty of Chemistry and Pharmacy, 1164 Sofia, 1 James Bourchier Blvd., Floor 8

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Email: elor_66@abv.bg

Eleonora has a substantial experience in information and communication management, in training and project work. She is involved in a large spectrum of publication activities at the SRC and in provision of relevant information to the research community at Sofia University.

She is the editor of an on-line journal (HORIZONTI) for academic publications, mainly project related, published twice a year and she also edits the Yearbook of research projects at Sofia University. Eleonora compiles and publishes a monthly bulletin with funding opportunities for students and researchers, events, and publications.

Since July 2012 she also acts as an Industry liaison officer between CERN and Bulgarian industry at Sofia University.

Zlatina Karova

Head of the TTO and Project Activities Unit at the SRC

(Vice-member at HEPTech Board in CERN for Bulgarian Sofia University)

Scientific Research Centre (SRC) at Sofia University "St. Kliment Ohridski"

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Zlatina Karova is a lawyer who specializes in international law and justice. She has a master's degree in European Public Administration from the Sofia University "St. Kliment Ohridski" and a number of certificates and completed training courses from prestigious international organisations like the World Bank, Swiss Agency for Development and Cooperation and the Federal Academy of Public Administration.

Zlatina Karova has many years of practical and teaching experience in public administration at central and local level. She has expertise and experience in the field of legal affairs, business analytics and as a local government consultant to government bodies and public associations.

At present, Zlatina Karova is Head of Unit, Centre for technology transfer and project work in the research sector of Sofia University "St. Kliment Ohridski", where she is responsible for the development, reporting, implementation, evaluation and sustainability of over 50 projects funded under FP7 EU funded "research". Zlatina Karova is a member of the Council for Public Consultation of Parliament, member of the Association of Heads of Innovation, member of the Public Council at the "Youth" Ministry of Education, member of the "BAA" Foundation and a member of "Women in Industry".

In recent years Zlatina Karova established herself as a leading expert in the evaluation of programs and projects, the relationship between science, business, strategic human resource management, organizational development, consulting with stakeholders and project cycle management, and public procurement orders.

Science & Technology Facilities Council

Location UK

Website http://www.stfc.ac.uk/

The Science and Technology Facilities Council (STFC) is one of Europe's largest multi-disciplinary research organisations. Our vision is to maximise the impact of our knowledge, skills, facilities and resources for the benefit of the UK. Our research has impact across a wide number of areas including: energy, security, healthcare, and environment.

Researchers in the area of Matter and Material study the internal structure of a wide range of different materials. Results contribute towards a better understanding of processes occurring in nature and provide starting points in the development of new materials for technical applications.

Part of Research Councils UK, STFC is funded by the government to support world class science and technology by:

- Supporting researchers through grants, particularly in astronomy, particle physics, space science and nuclear physics;
- Providing access to world class scientific facilities in the UK at the Rutherford Appleton and Daresbury Laboratories, UK Astronomy Technology Centre and Chilbolton Observatory;
- Providing access to world class scientific facilities abroad, such as CERN, the Institute Laue Langevin (ILL), the European Synchrotron Radiation Facility and telescopes in Chile and Hawaii;
- Supporting scientific and technical expertise in the UK in areas ranging from microelectronics, alternative energy production and particle and nuclear physics, to space and ground-based astronomy.

STFC's investment in science and engineering generates ideas and technologies with a broad social and economic impact. Researchers are encouraged to create new businesses based on their discoveries and STFC helps established companies use its research to improve their products and services.

Karen Lee

Marketing Manager at STFC

Science and Technology Facilities Council (STFC)

Contact: Science and Technology Facilities Council, Daresbury Laboratory, Sci-Tech Daresbury, Daresbury, Warrington, WA4 4AD

Tel: +44 1925 603708

Email: karen.lee@stfc.ac.uk

http://www.linkedin.com/pub/karen-lee-stfc/24/912 b44

Karen is working as part of the Business and Innovations directorate to increase the economic and societal benefit of STFC's research, innovation and skills by driving marketing strategies and activities targeted at industry. These include industry-related projects such as the STFC CERN Business Incubation Centre and ESA Business Incubation Centre. Karen is also working with HEPTech to coordinate the marketing communications strategy for the network.

Karen is working with other joint venture partners to drive the development of the UK's two national science and innovation campuses at Sci-Tech Daresbury and Harwell, Oxford. She also interacts with other STFC departments and centres to support their engagement with industry.

Karen is an experienced and enthusiastic marketing and communications manager who has worked across sectors including science and technology, innovation, charity, children's social care and education.

Charlotte Thompson

STFC: Entrepreneurship

Contact: Science and Technology Facilities Council, Daresbury Laboratory, Sci-Tech Daresbury, Daresbury, Warrington, WA4 4AD

Tel: +44 161 603632

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http://uk.linkedin.com/pub/charlotte-thompson/54/730/466/

http://www.stfc-cern-bic.org.uk/

Charlotte Thompson is part of the Entrepreneurship team at STFC. On this team Charlotte has essentially contributed to co-ordinate the STFC CERN Business Incubation Centre (BIC), a collaboration between the Science and Technology Facilities Council and CERN. The STFC CERN BIC is focused on developing new products and services using technologies originally developed for use in high energy physics research. There is £40,000 funding available, business support and technical assistance from both STFC and CERN to help small high-tech companies grow from technical concept to market reality.

Charlotte has also had an active role in implementing the business support package at the STFC Harwell Oxford campus and Scitech Daresbury campus as part of the Technology Strategy Board's Launchpad competition. She is the main contact point for the implementation of the scheme at the Scitech Daresbury campus, paying a key role in enabling several million pounds of investment into the campus companies over the next 18 months.

Charlotte has provided help with HEPTech events and meetings and compiled this yearbook to highlight the impact of HEPTech and showcase its members and key representatives. She is looking forward to welcoming HEPTech back in the coming months.

Charlotte previously studied at the University of Manchester with a Bachelors in Economics and a Masters in Enterprise. Her Masters looked at the commercial potential of a resource valuation and optimisation model. During her education Charlotte pursued the dream of being an Olympic rower and has now joined STFC to follow another passion, working with SMEs to help them flourish and grow.

Ian Tracey

HEPTech: Coordinator

STFC: Entrepreneurship

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Ian Tracey is the External Technology Transfer Group Leader at STFC. In this role, Ian oversees external technology transfer and intellectual property stemming from the European Space Agency, CERN and HEPTech – a technology transfer organisation of 24 large-scale research institutes based across Europe. Managing the ESA incubator at Harwell Oxford and the CERN incubator at Scitech Daresbury, Ian focuses on helping start up and early stage companies take their ideas from conception to implementation. As part of his work supporting business creation for science and technology innovators, Ian identifies individuals with high growth start-up backgrounds, who can help take IP into new products and companies, becoming tomorrow's business leaders.

Ian is an experienced technology transfer and innovation professional and has created, managed and guided various STFC spinouts. These include TeraTech Components, Cella Energy, DSoFt, The Electrospinning Company Ltd and PowerPredict. Ian continues to sit on several of their boards as a Non-Executive Director. A firm believer in the value of entrepreneurship, Ian created the Harwell Oxford Technology Entrepreneur Forum in 2012 with the aim of making Harwell Oxford the technology entrepreneurial hub of the Oxfordshire and Thames Valley area.

Ian's early career and educational background is in information systems engineering. He was sponsored by BT Research Labs through university, predicting the future telecommunications products 15 - 25 years ahead. Research topics included using Virtual Reality to enhance team working. He made the first transatlantic Voice over IP call, the first public broadband line was his home and he helped the fashion industry have a better understanding of demographic centric body profiles.

Gavin Tracey

Business Development at STFC Innovations Ltd

Science and Technology Facilities Council (STFC)

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Gavin completed a BEng (Hons) Electronics and Communications Engineering degree, incorporating a 12 month work placement as a competitor analyst at Nortel Networks. Upon his completion, Gavin accepted a position with Web Kiosks, a start-up company, where he had an influential role in the design and development of prototype kiosks.

Taking a year out, Gavin undertook a Masters degree in Vacuum Science which led to his position as a Technical Sales person (South UK) for Vacuum Generators. Gavin maintained the company's largest single account whilst increasing revenue and profitability within his territory.

Joining STFC Innovations in 2007, Gavin is working towards increasing knowledge exchange between the Science Technology Facility Council and industry.

While at STFC Innovations, Gavin is studying a Masters in Enterprise at the University of Manchester.

Penny Woodman

Head of External Innovation STFC

Science and Technology Facilities Council (STFC)

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Wales Innovation Relay Centre- Welsh Assembly Government – sector specialist for materials, automotive and aerospace.

Innovation & Technology Counselor – Welsh Development Agency

Materials Advisor – Institute of Materials Minerals & Mining

Penny Woodman, Head of External Programmes Knowledge Exchange for the STFC with responsibilities to encourage and facilitate Knowledge Exchange across all the UK Universities where STFC funds science based research in physics and astronomy and also with the International Facilities and Research Infrastructures. Her remit includes chair of the internal management group for sponsors of UK industry and is part of the UK Knowledge Transfer Network advisory structure. She has also facilitated a Cooperation in Science and Technology (COST) workshop on industry engagement with RIs based on the Square Kilometre Array (SKA) project.

Her previous roles all focus on knowledge exchange between high growth industry and academia on an international and national scale.

KØBENHAVNS UNIVERSITET

Location Denmark

Website http://fi.ku.dk/english/tech_trans

Technology transfer activities allow the leading-edge research and knowledge of the University to get out of the labs and into the commercial sector where it can be further developed and transformed into new treatments, medicines, products, etc. Technology transfer activities can potentially benefit millions of people.

The University of Copenhagen does not expect income from its technology transfer activities to replace normal research funding. However, we do not give our research away for free - we expect a fair payment, fair terms and conditions where all parties benefit, the researcher, the external partner and the University.

Success is not a simple measure in money - it is also about a mutually beneficial exchange of knowledge between the public and the private sector.

Success is when leading-edge companies develop our leading-edge research and make it available to people world-wide.

The University of Copenhagen excels in biotechnology and medicine. The Tech Transfer Unit in the division of Research & Innovation is responsible for the activities regarding commercialising.

Karen Laigaard

Board member at NTNU Technology Transfer AS

University of Copenhagen

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Technology transfer director with experience from both Denmark and the United Kingdom. Also holds position as Vice-President of the Association of Science & Technology Tranfer Professionals (ASTP), a membership association of 500+ members, HQ in The Hague.

Formerly employed with the Danish Ministry of Science, Technology and Innovation and Glasgow University and The British Council in the UK.

Specialities: Ample experience of public administration, intellectual property management, a good mediator, facilitator and negotiator, project management, problem solving, speech writing.

מכון ויצמן למדע

WEIZMANN INSTITUTE OF SCIENCE

Location Israel

Website http://www.weizmann.ac.il/pages/technology-transfer-0

The Weizmann Institute of Science is one of the world's leading multidisciplinary research institutions. Hundreds of scientists, laboratory technicians and research students working on its lushly landscaped campus embark daily on fascinating journeys into the unknown, seeking to improve our understanding of nature and our place within it.

Guiding these scientists is the spirit of inquiry so characteristic of the human race. It is this spirit that propelled humans upward along the evolutionary ladder, helping them reach their utmost heights. It prompted humankind to pursue agriculture, learn to build lodgings, invent writing, harness electricity to power emerging technologies, observe distant galaxies, design drugs to combat various diseases, develop new materials and decipher the genetic code embedded in all the plants and animals on Earth.

The quest to maintain this increasing momentum compels Weizmann Institute scientists to seek out places that have not yet been reached by the human mind. What awaits us in these places? No one has the answer to this question. But one thing is certain – the journey fired by curiosity will lead onward to a better future. Groundbreaking medical and technological applications that have emerged from basic research conducted by Weizmann Institute scientists include:

Amniocentesis, a prenatal diagnostic test for the fetus

Sophisticated laser systems for high-precision diamond cutting

A method for growing hybrid seeds that prevents the transmission of disease from one generation to the next and helps protect edible plants from pests

Affinity chromatography, a key tool for purifying biological materials in the biotechnology industry

Living polymerization, one of the most fundamental techniques of the modern polymer industry

For solving the structure of the ribosome, the cell's protein factory, and revealing its means of action, the Institute's Prof. Ada Yonath was awarded a Nobel Prize in Chemistry. Her research should speed the development of antibiotic drugs that are more efficient, especially against antibiotic-resistant strains.

George Mikenberg

Weizmann Institute of Science

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Born in Argentina 15/07/1947. Finished High School in Nicaragua 1964; Started University studies at Hebrew University in Jerusalem (1965); Moved to Chile in 1967; Completed his Licenciate Degree at Pontifical Universidad Catolica de Chile (1969); Completed his MSc and PhD at the Weizmann Institute (1974); Did his Post-Doc at Fermilab (1974-1977): Measured the size of the π, K, P and their anti-particles; designed, constructed and commissioned the first particle detector using Optical Fibers.

Joined the Weizmann Institute staff and was sent to DESY (Hamburg) (1977-1982): designed, constructed and commissioned the second calorimeter in the world using wavelength-shifters and did the analysis to confirm the discovery of the Gluon using neutral energy; measured the QED process e^+e^-->γγ to obtain limits in contact interactions.

Started an Israeli group (Tel-Aviv, Technion, Weizmann) to participate in the OPAL experiment at the Large e^+e^- Collider (LEP at CERN) (1982-1996): Developed the construction technique for a new type of gaseous detector (TGC) and was responsible for the construction, commissioning and running of the Hadron Pole-Tip Calorimeter of the OPAL Experiment.

OPAL Experiment Physics Coordinator during the preparatory phase (1986-1989) and during the exploitation phase of the Experiment (1992-1994).

Drafted the first agreement with CERN, for Israel to become the first Paying Observer Country to the CERN Council (1991). Became the Industrial Liaison Officer for Israel (1992-now) and managed to bring orders by CERN for Israeli High Tech products exceeding a total of 30M US$.

Became member of the High Energy Physics Division of the European Physical Society (1992): brought the large EPS Conference to Jerusalem (1997); became the Secretary (1997-1999) of the Division and its Chair (1999-2001), introducing major changes to its conferences and Prizes.

Started the Israeli Collaboration that participates in the ATLAS Experiment at Large Hadron Collider (LHC at CERN) (1994-now) and coordinated the construction of the MUON Trigger System. From 1999 to 2008 was the Project Leader of the ATLAS MUON Spectrometer.

Has been a member of the Restricted European Committee for Future Accelerators (2003-2011) that evaluates the HEP situation in all European Countries.

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