# European Science, Engineering and Technology Highlights[1]
## AUGUST 2013

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[1] *Note: If you would like additional information or background, please feel free to contact either Carine Polliotti at cpolliot@nsf.gov or Ana Helman at ahelman@nsf.gov*

**Slovakia:**

15. Slovakia Launches New Policy Measures Supporting R&D and Innovation

## 1 EU Pushes Through Unified Patent Court

Brussels has paved the way for a specialized European patent court to solve disputes in one instance and avoid multiple litigation cases in up to 28 different national courts.

The European Commission announced on July 29 the legal framework for Europe-wide patent protection by updating EU rules on the jurisdiction of courts and recognition of judgments, the so-called Brussels Regulation.

The changes are intended to make it easier for companies and inventors to protect their patents. The Unified Patent Court will have specialized jurisdiction in patent disputes, with an aim to cut legal costs and speed up decisions in patent infringement cases. “In the event of a dispute, companies will no longer have to launch actions before a number of courts in different countries,” said Vice-President Viviane Reding, the EU’s Justice Commissioner. “Removing bureaucratic obstacles, extra costs and the legal uncertainty of having 28 different and often contradictory systems makes the single market more attractive. This is a very good example of how justice policies can stimulate growth.”

*Full article available at: http://www.euractiv.com/innovation-enterprise/eu-pushes-unified-patent-court-news-529632?utm_source=RSS_Feed&utm_medium=RSS&utm_campaign=EurActivRSS*

## 2 EU and the US Extend Scientific Co-Operation on Standards and Measurements

To help reaching the goal of having compatible standards across both sides of the Atlantic, the European Commission's Joint Research Centre (JRC) and the US National Institute of Standards and Technology (NIST) on Wednesday 17 July, 2013 agreed to expand their current scientific co-operation to 10 different areas related to standards and measurements. Environment and climate, energy, transport and security feature high on the collaborative research agenda. Healthcare and clinical measurements, food safety and nutrition, as well as nanotechnology will be subject of the development and harmonization of methods, indicators and documentary standards. Besides reference materials in a range of areas, the co-operation will include research on civil engineering structures and emerging Information and communication technologies (ICT), as well as marine optical radiometry.

*Full article available at: http://ec.europa.eu/dgs/jrc/index.cfm?id=1410&dt_code=NWS&obj_id=17370&ori=RSS*

## 3 First EU-US Interoperability Centre on E-vehicles and Smart Grids Inaugurated

The first of the twin centers designed to promote common standards in electric mobility and smart grids on both sides of the Atlantic was today inaugurated near Chicago. Converging standards and interoperability between smart grids and electric vehicles will allow for deeper penetration of renewable energies in the electricity systems, thus facilitating the way to a low-carbon economy. Technology harmonization will drive product and service innovation in the two world's largest economies and could prove instrumental in establishing global standards for electric mobility. The launch of the Interoperability Centre for electric vehicles and smart grids is the fruit of 18 months of dedicated work following the Letter of Intent for closer co-operation, signed by the Joint Research Centre (JRC), the European Commission's in-house science service, and the US Department of Energy (DOE) in 2011. The Interoperability Centre inaugurated is hosted at DOE's Argonne National Laboratory near Chicago. The second Centre will be opened in the EU, at the JRC sites in Petten, The Netherlands and Ispra, Italy, in 2014.

*Full article available at:*
*http://ec.europa.eu/dgs/jrc/index.cfm?id=1410&dt_code=NWS&obj_id=17390&ori=RSS*

## 4 New ERC Starting Grant Results: €400 Million to 287 Early-Career Top Researchers

European Research Council

The European Research Council (ERC) has selected 287 top scientists in its sixth Starting Grant competition, which is the last one under the EU's Seventh Research Framework Program (FP7). They are awarded nearly €400 Million (USD 531 Million), with grants being worth up to €2 Million (USD 2.6 Million) each. This coveted funding will enable early-career talent to develop their best, innovative ideas across the European Research Area (ERA). The share of women amongst the successful candidates in this Starting Grant call (30%) increased from last year (24%). This is a continuing trend over the past years. This call attracted 3,329 applications, which is a 50% increase compared to the corresponding group last year. Due to the substantially increased number of applications, the overall success rate dropped to around 9%. The next Starting Grant calls will fall under the new Framework Program 'Horizon 2020'.

*Press release available at:*
*http://erc.europa.eu/sites/default/files/press_release/files/press_release_stg2013_results.pdf*

## 5 Austrian Research and Technology Report 2013 Published

The Austrian Research and Technology Report, commissioned annually by the three Austrian ministries responsible for research and technology, i.e. the Federal Ministry of Science and Research (BMWF), the Federal Ministry for Transport, Innovation and Technology (BMVIT), and the Federal Ministry of Economy, Family and Youth (BMWFJ), highlights, based on current data, the developments in research, technology and innovation policy and compares Austria to other countries in select areas. In addition to reports on the development of R&D expenditures in Austria or Austria's ranking in the "Innovation Union Scoreboard (IUS)", which are published regularly in the Research and Technology

Report, the Report also contains analyses in specific areas of focus, this year for example on the topic of "knowledge and technology transfer between science and business".

*Source:*
*http://www.en.bmwfj.gv.at/ResearchandInnovation/Innovationandtechnologypolicies/Seiten/AustrianResearchandTechnologyReport2012.aspx*

## 6 Croatia Adopts a new Model for Research Funding

The Croatian Government has adopted the *"Decision on multi-annual institutional financing of research activities in public research institutes and universities for 2013-2015"* that radically changes the system of financing research activities from the State budget which has been in force since 1991. The previous system, in which research grants were awarded by the Ministry of Science Education and Sports (MSES) through the program *"Research projects (Z-projects)"*, was replaced on1 July 2013, with the multi-annual institutional financing of research activities. The amount of awards depends on the institutional performance indicators and agreements between the Ministry and research and higher education institutions. The seven Croatian Universities will receive in 2013 a total of €5.5million (USD 6.6 million). Most of the funds are awarded to the University of Zagreb (€3.4m or USD 4.5 million).

The main reason for cancelling the "Z-projects" program was its poor competitiveness and contribution to scientific excellence. The program funded a large number of small scientific projects with high acceptance rates (more than 80% of proposed projects). Starting from 1 July 2013, the allocation of competition-based research project grants is transferred to the Croatian Science Foundation (CSF) which uses a rigorous evaluation process that should result in a small number of high-quality research projects (around 20% of proposals). The total funding allocated to CSF in 2013 for research projects amounts to around €6.8m (USD 9 million). That is only about 40% of the previous budget funds for "Z-projects". The government, however, plans to increase these funds to €13.5 (USD 18 million) in 2014.

*Adapted from:*
*http://erawatch.jrc.ec.europa.eu/erawatch/opencms/information/country_pages/hr/highlights/highlight_0011 and http://public.mzos.hr/Default.aspx?art=12629&sec=2127*

## 7 Increased 2014 Budget for the German Federal Ministry of Education and Research

The Federal Government is continuing to make targeted investments in education and research even in times of budgetary consolidation. In 2012, the budget of the Federal Ministry of Education and Research (BMBF) increased by 11%, the provisions for 2013 grew by 6.3% compared to 2012 (totaling about €13.75 billion or USD 18.4 billion) and, despite the attempt of budgetary consolidation, the Government draft for the 2014 federal budget provides for a further increase in the 2014 budget for the BMBF of about €224 million (USD 300 million), up to a total of some €14 billion (USD 18.7 billion).

*More information available at: http://www.bmbf.de/en/96.php*

## 8 Germany Woos Top Scientists and Researchers in San Francisco

The 13th Annual Meeting of the German Academic International Network (GAIN) from August 30 through September 1, 2013 in San Francisco is expected to attract roughly 300 of the best German early-career researchers and scientists working in the U.S. and Canada. There they will meet over 150 top-ranking representatives from German research, politics, and industry. For the first time since it was first held in 2001, the final day of the conference, Sunday September 1, 2013, is also open to non-German researchers, seeking information on transatlantic careers and collaborations. This year's motto "Priority for Science and Research" addresses Germany's growing demand for highly qualified young scientists. Furthermore, the current debate about the future and sustainability of the German research system will be a central theme.

In various workshops and networking events the participants get a chance to debate, make valuable contacts, and communicate their concerns and ideas directly to the representatives from Germany. Expected guests are the Deputy Secretary in the Federal Ministry for Education and Research, Cornelia Quennet-Thielen, and the Minister for Science, Research and Culture of the State of Brandenburg, Prof. Sabine Kunst. The leadership of all German research and funding organizations as well as the top German universities will be in attendance. The Keynote will be delivered by Dr. Ijad Madisch, founder and CEO of Research Gate, an online social network for researchers, who is also a former participant of the GAIN conference and a returnee from the U.S.

The conference is hosted by the Alexander von Humboldt Foundation (AvH), the German Academic Exchange Service (DAAD), and the German Research Foundation (DFG) under the umbrella of their joint initiative GAIN, and funded by the Federal Ministry of Research and Education.

*Press release available at:*
*http://live.rig2013.aperto.de/default/dachportal/en/Infoservice/News/2013/08/2013-08-14-germany-woos-top-scientists-and-researchers-in-san-francisco.html*

## 9 Three Eastern European Countries Are Gearing up to Host Powerful Light Sources

Last month, an order was placed for a pair of titanium–sapphire lasers. With an output of 10 petawatts, each would be about nine times more powerful than the strongest laser in existence today — capable of exploding the nuclei of heavy elements. Nearly as special as the lasers is the place where they will be delivered: Măgurele, Romania, a town of 11,000 people that was once home to a Soviet-era research reactor. In June, workers broke ground at the construction site for a new research center to house the twin lasers.

It would not be possible for the former Eastern bloc nation to afford the project's €356-million (US$475-million) cost: expenditures on research and development in Romania are among the lowest in Europe. Instead, the European Union (EU) is expected to pick up most of the tab, as it plans to for two other facilities, in Hungary and the Czech Republic. The three projects, along with a fourth still on the drawing board, will make up the Extreme Light Infrastructure (ELI) — an experiment in using EU structural funds to advance research. Structural funds, which make up more than one-third of the EU budget, are aimed at reducing economic disparities across Europe. They typically pay for local projects such as road repair, construction of power lines or clean-up of industrial waste — not super-

powerful lasers. And although any member state can apply for these infrastructure funds, most of the money goes to the poorest countries. ELI, by contrast, is an international research institute that will encourage scientists to do laser experiments at higher energies, intensities and speeds. Both France and the United Kingdom wanted to host the project, marked as a priority in a 2006 road map for European research. But structural funds provided the Czech Republic, Romania and Hungary with a way to pay for it. Advocates for using the money in this way touted the potential of ELI to stimulate economic growth. Romania hopes to attract technology companies and establish Măgurele as a 'laser valley'; the region is also planning to build a smaller laser facility to train its scientists to participate in ELI.

*Source: http://www.nature.com/news/europe-sets-sights-on-lasers-1.13551*

## 10 Irish Government Sets New Targets and Measures for Investment in Science, Technology and Innovation

The Irish Government approved the publication of a *"Framework for monitoring public investment in Science, Technology and Innovation"* in line with the National Research Prioritization Exercise on June 25, 2013.The National Research Prioritization Exercise identified 14 Priority Areas of research which show greatest opportunity in terms of supporting jobs and delivering societal benefit. The Government also approved the publication of individual Action Plans for each of the 14 Priority Areas, representing the detailed blueprint for actions to be taken by funding Departments and Agencies to re-align to majority of competitive public research funding around the priority areas over the next five years.

*Source: http://www.djei.ie/science/technology/rpmaps.htm*

## 11 Italy's First Academic Research Assessment Published

Italy's first-ever national research assessment has been received cautiously by scientists, who demanded greater transparency in its data collection process. The Italian university research evaluation agency, Anvur, published the results of the assessment exercise on 16 July. It is the first time research performance data have been evaluated across Italy, and the results will be used to distribute €540 million (USD 718 million) in funding for academia. The Anvur assessment examined nearly 185,000 publications and other research "products" produced by professors and scientists at 133 universities and research institutes. The analysis of the results shows that the University of Padova is the best of the large universities, the University of Trento is the best of the medium-sized universities and Sant'Anna School of Advanced Studies in Pisa stands out among the small ones. Overall, the best universities are mostly in the north of the country. "The gap between north and south is unfortunately growing," warns Stefano Fantoni, Anvur's president.

*Full article available at:*
*http://www.researchresearch.com/index.php?option=com_news&template=rr_2col&view=article&articleId=1337348*

## 12 Updates from the FYR of Macedonia

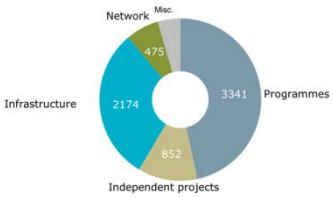
The Government of the Former Yugoslav Republic (FYR) of Macedonia adopted a new Law on Innovation Activity in May 2013, which determines the innovation activity, as well as principles for commercialization of the results of the innovation activity, the scientific research activity, the technical and technological knowledge and of the inventions. The law envisions establishment of a body entitled "Fund for innovation and technological development", which will finance and logistically support the innovative projects in order to improve the competitiveness of Macedonian companies through development of new knowledge and innovation.

In June 2013, the first ranked university in the country "Ss. Cyril and Methodus" University in Skopje opened a new Regional Centre for social innovations, through its Faculty for Computer Science and Engineering. The center is specialized for development of mobile applications, as well as for development and testing of Information Technology (IT) products and services for the private sector.

*Source : http://erawatch.jrc.ec.europa.eu/erawatch/opencms/information/country_pages/mk/country*

## 13 Key Figures for the Norwegian Research Council in 2012

Approximately one-third of all public research funding in Norway is channeled via the Research Council of Norway. Key figures summarizing the Research Council's activities for the period 2008-2012 are now available. The publication Key figures for the Research Council provides statistics for projects, allocations and grant applications and key figures for the Council's allocations for the period 2008-2012. Each year the Research Council receives around 5 500 grant proposals for funding of new projects. The Research Council administers allocations from 16 ministries. In 2012, these allocations totaled more than NOK 7.2 billion (USD 1.2 billion). Nearly 40% of this funding is allocated by the Ministry of Education and Research. Nearly 75% of the Research Council's allocations are awarded to institutions of higher education and independent research institutes and nearly 45% of the total allocations are distributed via the Council's research programs. In recent years there has been a substantial increase in allocations to projects seeking funding under independent competitive arenas at the Research Council that are not affiliated with specific research programs. The subject fields "Mathematics and Natural Sciences" and "Technology" still receive the largest proportion of project funding across all sectors. In terms of percentage, however, the largest increase in allocations is found in the categories of "Humanities", "Social Sciences" and "Agriculture and Fisheries Science/Veterinary Sciences".




*Full article available at:*
*http://www.forskningsradet.no/en/Newsarticle/Key_figures_for_the_Research_Council_for_2012/1253988479810*

## 14 EIB Supports Research and Development in Poland with Almost EUR 1 Bn

The European Investment Bank (EIB) is providing two loans amounting to EUR 970 million (USD 1.3 billion) for research and development (R&D) activities in Polish research institutes, universities and business enterprises. With these loans, the EIB will assist Poland in improving its readiness to

contribute to the common European Research Area by strengthening R&D infrastructure potential and the R&D capabilities of scientific institutions.

The first EIB loan of EUR 490 million (USD 655 million) will finance R&D project grants, which will be awarded by the National Science Centre and the National Centre for Research and Development through open calls to Ph.D. students, post-doctoral fellows and senior scientists. These projects will concern either basic or applied research and will be implemented at public research institutes, universities and business enterprises across Poland.

The EIB is lending a further EUR 480 million (USD 642 million) for the statutory research tasks performed by all categories of scientific and academic staff employed by Polish public universities, colleges and research institutes in the majority of scientific disciplines (except medical research performed at university hospitals and defence-related research). Through this loan, the EIB will also support capital investment of the Polish Ministry of Science and Higher Education in public R&D infrastructure and scientific equipment.

*Note: The EIB is the long-term lending institution of the European Union owned by its Member States. It makes long-term finance available for sound investment in order to contribute towards EU policy goals.*

*Source: http://europa.eu/rapid/press-release_BEI-13-114_en.htm?locale=FR*

## 15 Slovakia Launches New Policy Measures Supporting R&D and Innovation

The Slovak Ministry of Education, Science, Research and Sports signed contracts on building eight University Science Parks with six Universities in July 2013. The total value of contracts is €280m (USD 371 million), of which €15m (USD 20 million) is provided by the state budget and the rest by the Operational Program Research and Development (OPRD) provided by the European Union. All projects must be completed by June 2015. The University Science Parks is the most important policy initiative supported by the OPRD. The OPRD invested in several hundreds of small-scale projects and accounted for low spending rates in 2008-2013. Some 38.5% of the program budget was spent by June 30, 2013. The large-scale projects help increasing spending rates and focus financial support on selected R&D themes. Generous support from the EU Structural Funds contrasts with meager national funding for research and innovation. The Slovak Ministry of Economy and the Slovak Innovation and Energy Agency launched the first scheme for innovation vouchers on July 1, 2013. The value of one voucher was set to €3500 (USD 4647) and the total budget of the scheme is €100,000 (USD 133,000). All projects supported by the voucher scheme must be completed by November 30, 2013.

*Source: http://erawatch.jrc.ec.europa.eu/erawatch/opencms/information/country_pages/sk/highlights/highlight_0012*