

2013
ANNUAL REPORT









Deans

FACULTY OF HUMANITIES Dean Eija Suomela-Salmi

FACULTY OF MEDICINE Dean Tapani Rönnemaa

TURKU SCHOOL OF ECONOMICS

FACULTY OF LAW Dean Jukka Mähönen

FACULTY OF SOCIAL SCIENCES Dean Kimmo Rentola

FACULTY OF EDUCATION Dean Marja Vauras

Deans discuss the higlights of the faculties in 2013 on p. 6-10.

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RECTOR'S REVIEW 2013

2013 was an eventful and active year for the University of Turku. It was also profitable.

This year, the efforts of the whole staff and especially students were rewarded by better learning results. A total of 1 461 students com-

pleted a lower academic degree, 1633 completed a higher academic degree and 162 Doctoral Candidates finished their doctorate. We have finally reached the number of

graduates we have been aiming at. Now we have a great opportunity to concentrate on developing the quality and making sure that the level of completed degrees remains this high.

In addition, more research results were published than before. As a whole, our researchers published over ten scientific articles every day of the year. What is particularly significant is that the number of articles published in the most prestigious journals has increased. The solving of one scientific problem almost always creates new questions, so the preconditions for the continuous development of the quality of our research seem great. Furthermore, the number of inventions has increased by almost a third from the previ-

In 2013, we made several structural reforms concerning our independent units and industrial and commercial activities. We combined separtate independent units into larger operational units and transferred some of them back under the administration of the faculties. The goal of these actions is to improve our influence in the society and secure our economic stability in the future.

The number of the teaching and research staff in the faculties increased slightly and the number of the administrational staff decreased by 3%. In 2013, the University staff completed 3314 person-years, which is 32 more than in the previous year. The increase in the facility costs slowed down considerably from the last few years.

Success requires a great amount of work. The commitment and enthusiasm of the whole university staff and students are needed for the University to achieve good results. I want to thank all the members of our community for a successful year 2013.

Kaleur Vaananen

Kalervo Väänänen





EDUCATION CREATES CONTINUITY

Seven faculties offer a variety of subjects in different fields. There are nearly 100 major study programmes and 40 minor study modules. According to a survey of sixth-formers in 2013, the University of Turku is the second most interesting and well-known multidisciplinary university in Finland. The teaching also produces results. The number of both Master's and doctoral degrees exceeded the goals set by the University with the Ministry of Education and Culture.

"The Faculty made a complete educational structure reform in the undergraduate studies."

Faculty of Mathematics

"Our students continue to graduate so fast that even the Rector is amazed. We have been preparing for a great change: joint entrance exams in political sciences and in social sciences. As a result, we will combine some of the basic studies as well. Another great change has already begun, the doubling of the student intake in social sciences which will meet the needs of the society."

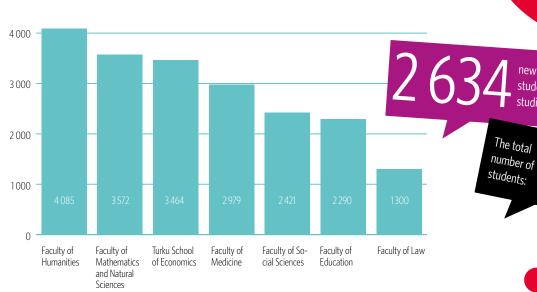
Faculty of Social Sciences

new undergraduate students began their

studies in the autumn



5000



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Work on the syllabi for the new units and the clarification of study tracks in different subjects has begun well. Especially the School of Language and Translation Studies made significant progress in creating more extensive study modules."

"In August, the Faculty initiated the new training programme for the licentiate of medicine with an extended intake of students, 155 of them."

"We gave the larger intake of students an even better basis for their studies at the University. Larger quantity doesn't have to decrease quality."

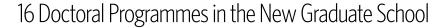
"We drafted an extensive plan for modernising the study environments. Modern spaces for education will be built in Educarium, which will function as models for new study environments and teaching technology on both the Turku and Rauma campuses.

completed their degree



CREATIVE RESEARCH

The core of the University of Turku is versatile and high-quality research. In 2013, our research took a leap forward. A larger proportion of the personnel work in research than before, partly thanks to the several research projects: 31% of the personnel are research staff. The reformation of the Graduate School also created a strong basis for research.



The Graduate School of the University of Turku UTUGS was reformed in the Autumn of 2013. Altogether 16 Doctoral Programmes were established at the Graduate School and 100 new doctoral training positions funded by the University were opened for application.

The number of the doctoral training positions increased by nearly 14%. All in all, there are 200 places, a quarter of which will be opened for application each year. Over 800 Doctoral Candidates applied for the first hundred places that were opened. Over a third of the applications came from abroad.

Since the reformation in the summer of 2013, all of the approximately 1800 Doctoral Candidates of the University belong to one of the University's Doctoral Programmes which cover all the faculties.

In 2013, the evaluation of the applications for the Doctoral Programmes was carried out on the level of the whole University for the first time. When deciding on the programmes and the number of the positions, the University considered information about the supervisors' research, the total of completed degrees, the number of completed degrees by foreign students, the programmes' operations and syllabi as well as the networking of the programme.

The establishment of the Graduate School in 2011 has made the graduation of Doctoral Candidates remarkably more effective. Instead of the approximately 150 doctors that graduated in earlier years, 182 doctors graduated in 2012 and 162 in 2013.



"The great success of the Departments of Psychology and Philosophy in international rankings has continued and now history has joined the group as well. In addition, the media success of Professor Jani Erola's social class research and his ERC grant were particularly gratifying."

Faculty of Social Sciences



INTERACTION WITH THE SOCIETY

All the operations of the University of Turku influence the function and development of the society within different spans of time. The University offers multiple services; for example, new innovations and cooperation with companies as well as different kinds of collaboration between employers and students. Through science communications and the popularisation of science, the most recent research results are brought to the awareness of the public.

"The Biobank Act came into force in September and together with the hospital districts of western Finland the Faculty has done intensive groundwork for establishing the Auria Biobank.

We hired two professors and three other members of staff for the bank."

"Active interaction with the society helps us to develop the societal relevance of the education."

"We have active and multiple operations in the region and are one of the most visible faculties of the

Faculty of Mathematics and Natural Sciences

"We developed our strategy with the help of a new, international Advisory Board and continued active participation in the ICT and maritime industry development projects."

Turku School of Economics

"Our diverse continuing education programme was even more successful than before and it is our most central way to interact with the society."

Faculty of Law

"The development of the export of teacher training continued strongly and we also planned extensive module-based education. At Rauma, the beginning of the uniform basic education increased the cooperation between the city and the University. We participated strongly in the discussion about educational policy in regard to the equality of Finnish education."

Faculty of Education

"The education of social work increased, sociologist are carrying out significant research on social class, the KiVa School project of the Department of Psychology remains successful and the researchers of the Faculty are sought after by the public, especially those of the Centre for Parliamentary Studies."

Faculty of Social Sciences

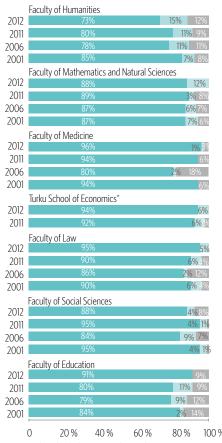
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89 % of those who graduated in 2011 were employed

of those who graduated in 2011 were unemployed

Labour Market Position



* Turku School of Economics first took part in the survey in 2008.

Labour market position survey 2013

employed

unemployed

outside the workforce

Work Corresponds to Education

Facu 2012	lty of Humanities 56%	7%	37%
2011	62%	2%	35%
Facu	lty of Mathematic	s and Natural Sci	ences
2012	78%		2 % 20%
2011	67%	69	6 27%
Facu	Ity of Medicine		
2012	63%	2	22% 15%
2011	73%		14% 13%
Turki	u School of Econo	mics	
2012	56%	3	3% 11%
2011	65%	9%	6 26%
Facu	lty of Law		
2012	90%		8% 2%
2011	69%		10% 21%
Facu	Ity of Social Scien	ices	
2012	61%	10%	29%
2012 2011 Facu 2012	65%	9%	26%
Facu	Ity of Education		
2012	78%		11% 11%
2011	73%		14% 13%
0	20 % 40	0 % 60 %	80 % 100 %

Business from Science

The New Knowledge and Business from Research Ideas programme funded four development projects of the University in 2013 and decided to fund two more at the end of the year.

Funded development projects in 2013:

- KiVa School anti-bullying programme
- Whispers-af-detect detecting atrial fibrillation
- @EduMental electronic services for mental health work
- the biomarkers of endometriosis

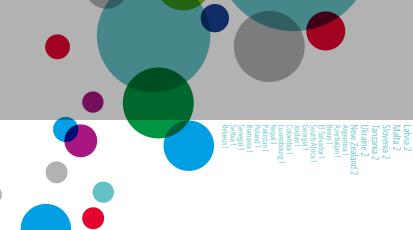
Projects to receive funding:

- development of oligoadjuvant in allergy desensitisation
- Aistila commercialising research on senses



- Work corresponds to education
- Work is more demanding than the level of education
- Work is less demanding than the level of education

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EVERY DAY IS INTERNATIONAL

The focal point of the international education is the 16 international Master's degree programmes. In 2013, the target number of the international degree students was clearly exceeded: 843 international degree students studied at the University of Turku when the goal was 500.

International research cooperation, participation in international academic networks and university visits are all part of the University's everyday life. In 2013, education export took a step forward when the universities of Turku, Tampere and Eastern Finland established a joint education export company Finland University Ltd.

In addition in 2013:

- The University of Turku and the Transnational Health Science and Technology Institute (THSTI) of the Ministry of Science and Technology of India founded a joint diagnostics centre.
- The University of Turku and Fudan University initiated a joint engineer training programme.
- The Department of Education and Centre for Research on Lifelong Learning and Education joined a Nordic Centre of Excellence funded by NordForsk for the period of 2013–2018.
- The Turku science community began cooperation with the Russian Skolkovo Institute of Science and Technology.
- The John Morton Center, which carries out research on North America, was established as a new unit at the Faculty of Social Sciences.

Most Popular Subjects among the Exchange Students

Discipline the student was primarily accepted to study:

- Finnish Language and Culture for Foreigners
- Turku Law School
- Business Sciences, International Business
- Political History
- Baltic Sea Region Studies
- Education
- Finnish-Nordic Society and Culture
- English
- Nursing Science
- Geography

number and home country of international students

China 173

France 118

Spain 110
India 93
Pakistan 92
Iraly 81
Estonia 79
Iran 76
Nepal 45
Poland 45
United States 44
Japan 39
Nigeria 36
Ukraine 34
Hungary 34
Lithuania 33
Turkey 33
Bangladesh 31
Austria 31
Czech Republic 31
Vietnam 31
The Netherlands 29
Greece 28
Britain 24
Ethiopia 23
Belgium 22
Slovakia 22
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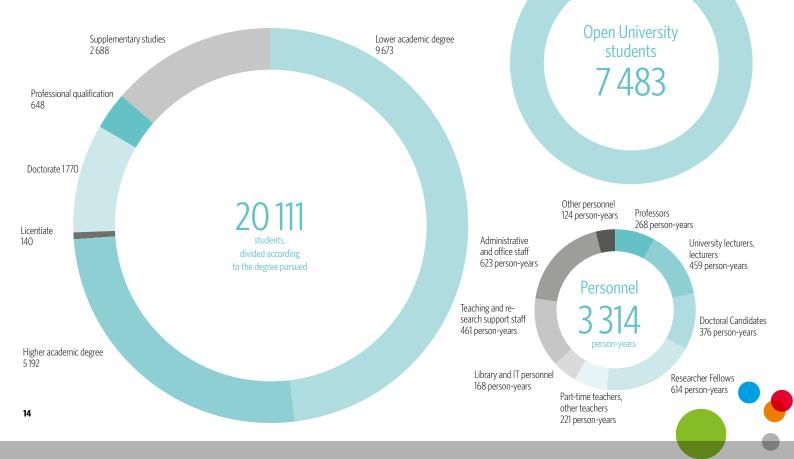
THE COMMUNITY ON OUR CAMPUSES

The University of Turku is a community of over 3 000 people. Turku, Rauma and Pori all have their own campuses. With the administrational reform that started in 2012 the University succeeded in remodeling the structure of its staff: the proportion of the research staff increased and administrational staff decreased.



HR EXCELLENCE IN RESEARCH

The European Comission awarded the University of Turku with the right to use the HR Excellence in Research logo. The logo reflects the University's commitment to the continuou development of its researchers' position and to offering a supportive and equal working



In the international QS World University Rankings, the University reached 205_{th} place

Philosophy and psychology among the best

101-150

Subjects. Ranking

151-200

for pharmacology, education, medicine and natural sciences as well as in language and translation studies and law.

Undergraduate Student Feedback Survey Reveals Strengths

According to the undergraduate student feedback survey, over 90% of the undergraduate students enjoy studying at the University of Turku. The survey was carried out for the first time in 2013.

The students of the Faculty of Medicine identified themselves most strongly with the University. The most purposeful about their studies were the students of the Faculties of Social Sciences and Law.

Over 85% of the respondents felt that they could easily find support and information about their studies. Nearly the same number agreed with the statements "I'm satisfied with my studies" and "the education is of high quality". About 65% felt that they have enough time for self-directed studies.

of the students were satisfied with their studies.

In future, the survey will be carried out every six months. The feedback will be helpful in the development of the operations and will affect the amount of funding the University receives from the government.



New Professors of the University of Turku in 2013

Indefinite period

- DMedSc Juha Grönroos, Gastroenterological Surgery (30%)
- DMedSc Ilkka Julkunen, Virology
- LLD **Reijo Knuutinen**, Commercial Law
- PhD Kalevi Kokko, Materials Physics
- PhD Hille Koskela, Geography
- LLD Seppo Koskinen, Labour Law
- DMedSc Matti Laato, Urology (30%)
- PhD Eila Lindfors, Technology Education
- DMedSc Heikki Minn, Clinical Oncology
- DMedSc (honorary) Ilkka Mononen, Clinical Chemistry (33.33%)
- SocScD Leo Nyqvist, Social Work
- PhD **Hannu Oja**, Statistics
- DMedSc Ville Peltola, Department of Infectious Diseases (30%)
- DMedSc Jaakko Pulkkinen, Otorhinolaryngology Head and Neck Surgery (30%)
- PhD **Eevi Rintamäki**, Molecular Plant Biology
- PhD **Harry Silfverberg**, Didactics of Mathematical Subjects
- Ph.D. Jukka Snell, European Law
- DMedSc (honorary) Andre Sourander, Child Psychiatry
- DDenSc Leo Tjäderhane, Cariology
- DSc Mika Vaihekoski, Financing
- PhD **Rami Vainio**, Experimental Space Physics

Five-year period

- LLD **Anne Alvesalo-Kuusi**, Sociology of Law (50%)
- DScHum **Petri Tapio**, Futures Research
- PhD **Baoru Yang**, Food Development

Some professors have also been employed for a period of less than five years

INDEPENDENT UNITS FOUND THEIR NEW PLACES

In 2013, the future of the independent units was strongly invested in by examining the operations of each unit and considering whether a different kind of organisation would work better than the existing one. After the changes were made, the operations of the independent units – teaching, research and development – continues in a larger scale and more effectively than before, but organisationally the number of the units decreased from 12 to 7.



Year 2013 was significant for us because...

Business and Innovation (BID) Centre

... BID managed to successfully expand its operations both nationally and internationally. The joint technology and business projects also progressed in leaps and bounds. Innovations were the central and successful focus of the Centre.

Antti Paasio, Director

Brahea Centre for Training and Development

... we prepared to operate in the new, more versatile Independent Unit. The Centre actively took part in developing the national system of continuing studies for the academically educated and in establishing the recognition of prior learning and skills in the syllabi of the institutions of higher education. The Open University remains popular: over 7000 students completed over 40000 credits, which is more than 200 Bachelor's degrees.

Kari Seppälä, Director

Centre for Maritime Studies

... our operations expanded to Oulu with new cooperation with the University of Oulu and local businesses. We used our expertise in maritime education and studies to support the development of the research of northern regions and arctic operational environments. In 2013, our research and training projects produced results; for example, the Centre participated in an extensive, EU-wide project that researches the efficiency and impact of harbours.

Anne Erkkilä-Välimäki, Director

Combined into the Brahea Centre of University of Turku at the end of the year.



Became part of Turku School of Economics at the beginning of August Became part of the Faculty of Mathematics and Natura Sciences at the end of the year

Functional Foods Forum FFF

... our researchers published their remarkable scientific findings on taste genes, food, cancer and health as well as on microbes of the bowel in the best scientific journals. We took part in organising the international *Non-Wood Forest Products, Health and Well-being* conference. We promoted food export by organising a Roadshow in China and Russia. The unit at Seinäjoki realised multidisciplinary KUMU-RU-project that combined culture, music and food

Seppo Salminen, Director

Language Centre

... we published our first electronic journal *Kielikeskus tutkii*. We are preparing for a move as, after spending years in several different buildings, we finally got facilities from Natural Science Building II which is currently being renovated. In 2013, our proofreading service for young researches had their 100th client.

Michael Nelson, Director

Finnish Centre for Astronomy with ESO

... we played a big part in organising the biggest yearly European conference of astronomy and space science, EWASS, in July 2013 at Logomo, Turku. Over 600 researchers from 50 countries participated in EWASS, making it the largest conference of astronomy ever held in Finland. The programme included 25 symposiums and special sessions and meetings of European associations. EWASS was a unique way to present Finnish research on astronomy as well as the ESO Centre, the University of Turku and the City of Turku on a European and worldwide scale.

Juhani Knuuti, Director

Finland Futures Research Centre FFRC

.... the University of Turku decided to establish a unit of futures research at Turku School of Economics from August 1, 2013, onwards. At the same time, FFRC was transferred to Turku School of Economics as a part of the administrational reform of the University. These decisions substantiate the teaching and the basic research of the FFRC. The possibility to write a doctoral dissertation in futures research is an internationally significant opportunity as well.

Juha Kaskinen, Director

Research Unit for the Sociology of Education RUSE

... the Nordic cooperation in the research of higher education was strengthened as the three-year joint project funded by NordForsk started. RUSE organised a two-day conference for the *Nordic Fields of Higher Education* network in Turku. Through additional funding, the Ministry of Culture and Education reasserted RUSE's position as the producer of quantitative research results which function also as evidence base in education policy. RUSE started a new cooperation with the Finnish National Board of Education in digital learning. *Osmo Kivinen, Director*

Turku PET Centre

... the Academy of Finland chose Turku PET Centre as the Centre of Excellence in cardio-vascular and metabolic research for the period of 2014–2019. In addition, the University of Turku and Åbo Akademi University promised funds for the procurement of a new cyclotron, which is a prerequisite for the function of the Centre. After this, we received the remaining funding that we needed and the high-quality research can continue in the future.

Jari Kotilainen, Director

Centre for Environmental Research

.... the building microbiology laboratory of the Aerobiology Unit passed the evaluation of Finas. Therefore it continues to have Evira's approval as a laboratory intended for carrying out research on health and living for health care officers according to the Health Protection Act 49 a §. At Kevo, the researchers measured the longest growing season and warmest summer since the project started in 1957. After many years, the Archipelago Research Instute managed to turn its unprofitable operations into a slight profit.

Ilppo Vuorinen, Director

Turku Centre for Biotechnology

... we exceeded our research goals in the number of published articles and dissertations. Our researchers received national and international funding, for example a large grant from the Finnish cancer association and JDRF grant from the United States. Two gifted group leaders established their own research groups. Biocenter Finland and Åbo Akademi University evaluated our operations giving us excellent assessments, and the University decided to continue to give funds for hiring personnel for the central administration of the Centre. The Central Animal Laboratory became part of the Faculty of Medicine. From our initiative, the University organised an English executive training programme that aims at increasing well-being at work. Riitta Lahesmaa, Director

Turku Centre for Computer Science TUCS

... the Doctoral Programmes of the University began. These replace the previous doctoral programmes funded by the Ministry of Education and they ensure the continuation of doctoral studies.

Johan Lilius, Director

STRONG FINANCES AND RENEWING CAMPUS

The financial statement of the University was 7.3 million euro in surplus in 2013. At the end of the year, both the liquidity and self-sufficiency of the University were on an excellent level. To safeguard its strong economy, the University continued the reform of the administration and service structures that began in 2012.



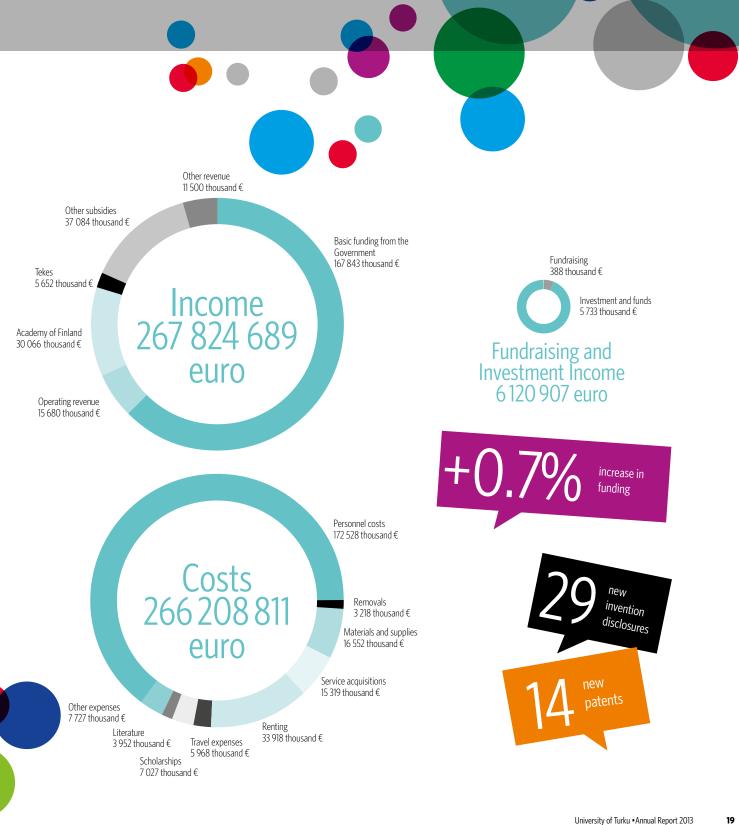
Renovated Facilities Natural Science Building II and Teutori

The renovation of the Natural Scince Building II started in full force in Octorber. The new Teutori building, a joint project with Turku University Foundation, was completed during the summer and the complete renovation of the adjoining part, which will provide more space for the Teutori building, started in the autumn.

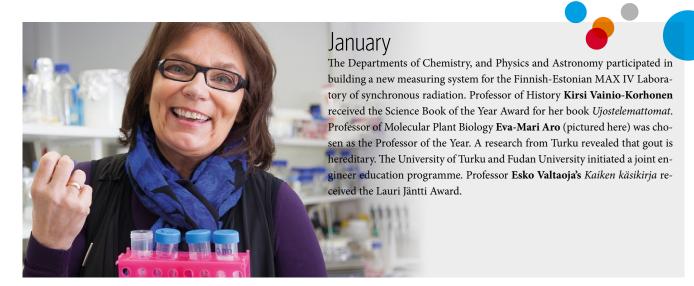
It is estimated that the renovation of the Natural Science Building will be completed at the end of the year 2015. Teutori will be in the full use of the University by July 2014.

The University Board decided to move forward with the new building for the Faculty of Medicine. A new Medisiina D building is planned to be built at Kupittaa and it is for the use of the University, the Hospital District of Southwest Finland, the National Institute of Health and Welfare , Turku University of Applied Sciences and possibly some private businesses.

The project of directing funds from facilities to operations started the previous year and now began on the Rauma campus as well. The University decided to give up 3 000 square metres and enhance the collective use of space with the Rauma Teacher Training School. The decision will save the University 400 000 euro in the yearly rent costs.



HIGHLIGHTS OF THE YEAR 2013



February

The University decided to double the intake of students to the Department of Social Work. Researchers from Turku found a way to make cancer cells that resist treatment dormant. The Universities of Turku and Tartu initiated a series of public lectures. Convention Director of Turku Touring and Master of Philosophy Sari Ruusumo (pictured here) was chosen as the Alumna of the Year.



March

The new national science, art and culture funding organisations database Aurora was opened and it is based on the databases of the University of Turku and the Council of Finnish Foundations Association. The Turku Clinical Biomaterials Centre developed a filling composite that is stronger than dentine and it was chosen as one of the world's most innovative new products. **Juho Terrijärvi** who studied biotechnology at the University of Turku received the 2013 Arenberg-Coimbra Award.



April

With 18 000 applicants, the University of Turku was the second most popular university in Finland. The researchers of the University of Turku and Åbo Akademi University developed a chemical composite that is an allergy vaccine booster. Museum Manager Ilari E. Sääksjärvi of the Zoological Museum was chosen as the Docent of the Year of the universities in Turku. An innovation camp for the academic students of the region was organised at the University (pictured here). The research on justice through education policy received a Nordic centre of excellence funding. Institutions that organise education in the Turku region established the biggest educational export consortium in Finland, FinnWayLearning. The Finnish Academy of Science and Letters included professors Iiro Honkala, Erkki Korpimäki, Seppo Salminen and Jorma Toppari as members of its Section of Science and professors Marja-Liisa Helasvuo and Marja Vauras as members of the Section of the Humanities.



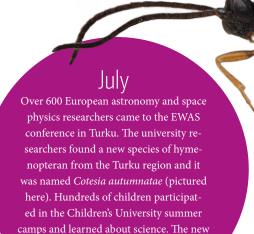
May
The main mirror of
the Herschel satellite, which
was cut at Tuorla Observatory, gathered more accurate information than expected.
Researchers from Turku together with their colleagues
from the United States found a new gene that causes osteoporosis. European Society of Cardiology gave an award to Postdoctoral Research Fellow Johanna Silvola of the PET Centre. The first Science Slam – an event
that popularises science – was organised at the University. The University of Turku and
Translational Health Science and Technology Institute of India founded a joint diagnostics centre. A total of 112 doctors and 13 honorary doctors were promoted.

June

The Academy of Finland named Eva-Mari Aro's integrative photosynthesis and bioactive compound and Juhani Knuuti's cardiovascular and metabolic research units as its Centres of Excellence. Eva-Mari Aro and Sirpa Jalkanen were appointed as new Academy Professors. The universities of Turku, Tampere and Eastern Finland established an education export company. The first students of the Bio Imaging Master's Degree Programme graduated. The University decided to open 100 new doctoral trainee positions. The European Comission gave the University the status of excellent employer. The







building Teutori was put into operation.

August

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A study module in sustainable development was added to the syllabus. Professor **Pirjo Nuutila's** research group found a new type of diabetes. The Futures Research Centre was transferred to Turku School of Economics and can now also offer postgraduate degrees. Sanako Plc donated remote laboratories in London and Barcelona to the Department of Phonetics. Over 288 researchers of consciousness gathered in Turku for the congress of Society of Anaesthesiologists. The Department of Physics was the first unit in Finland to offer *fast track* Master's degree education where students can graduate in three years.



photo: Ilari E. Sääksjärvi

September The ruins of the oldest religious building in Finland were found at the excavations of the Department of Archaeology at Kaarina. The professor of Criminal Law Jussi Tapani was chosen as the Teacher of the Year; the Faculty of Medicine's introduction to clinical skills, where more experienced students help the new students, was chosen as the Course of the Year. The School of Economics joined the Principles of Resposible Management Education programme of the UN. Two projects at the University received benchmark funding: biosciences and education of digital culture. Olli Carpén (pictured here) was chosen as the first Professor of Biobank in the Nordic Countries, the professorship was donated by the City of Turku. Medical Counsellor Sakari Alhopuro donated a three-year professorship of health and economics to Turku School of Economics and Faculty of Medicine. The John Morton Centre, which researches North America, was established at the University.



November

Professor of Immunology **Sirpa Jalkanen** became a member of Academia Europaea. The Luma Centre operations that inspire children to study mathematics, natural sciences and technology became a nationwide operation. The information session for the parents of sixth-formers was a success.

December

One of the key book of Western philosophy, Immanuel Kant's Critique of Practical Reason, was translated into Finnish for a first time by researchers at the Department of Philosophy. The University Board decided to move forward with the plans for the Medisiina D building. The University celebrated the use of Finnish Language in the Parliament for 150 years by organising a seminar. Professor of Media Studies Jukka Sihvonen and Professor of French Translation and Interpreting Yves Gambier were appointed as members of the Finnish Society of Sciences and Letters.

the Millennium Distinction Award to Senior Research Fellow Riikka Lund. Academy Research Fellow Kari Kal-

liokoski of the PET Centre received the 2013 Academy of Finland Award for the social reach of his

research.







University of Turku FI-20014 TURUN YLIOPISTO FINLAND tel. +358 2 333 51 www.utu.fi/en

