

Huawei Innovation Research Programme

Funding open innovation in Europe

The EU is looking to innovation, notably in ICT, to both address faltering growth and increase employment, especially among the young.

Universities and the ICT industry bring complementary resources and strengths to innovation. The ICT industry directly addresses the market, while academia focuses on vital theoretical breakthroughs and technological experiments.

Companies can rigidly define their research partnerships based on market demand. Or they can give their academic partners a degree of freedom, allowing them to set their directions based on their own areas of expertise. Together they can convert research into real results that create value for society.

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- Innovation is like running a marathon, not a sprint. The Huawei Innovation Research Programme (HIRP) rises to this challenge with long-term project funding to academic partners engaging in wide-ranging research, from fundamental research to industrial applications. Collaborative innovation benefits all participants and has led to major technology breakthroughs.
- Huawei invested €70m in technology collaborations with European partners in 2014 and HIRP projects are benefiting from an increasing share. HIRP has received nearly 100 research proposals from over thirty universities and research institutions in Germany, the UK (including Scotland), France, Finland, Switzerland, Sweden, Spain, Italy, and the Netherlands.
- In joint innovation projects, Huawei concentrates on areas where it has particular strengths and shares its own knowledge and understanding of the industry with its partners, seeing collaboration in open innovation as the only way to build a healthy technology ecosystem.
- Huawei's Seeds for the Future programme is honing the e-skills of Europe's most promising students, helping them stay up-to-date with the latest developments in ICT, as well as giving them a broader, international perspective.



I. What is HIRP?

The flexible collaboration models for all phases of academic research of the Huawei Innovation Research Program (HIRP) ensure effective cooperation between Huawei and its partners, so they can convert research findings quickly and efficiently into increased productive power.

- The HIRP Open project supports the ideation phase of the technological innovation process. It offers funding to a wide range of academic institutions for open research into new ideas, encouraging innovative research and steering it toward greater effectiveness and quality by making industry projections and judgments one of the key research inputs. Researchers are encouraged to publish their theses and articles in the HIRP Journal, so that their achievements and new ideas can be widely understood and adopted.
- The HIRP Flagship project focuses on industrial applications of key technologies. Top scholars are invited to help address major technological challenges facing both the ICT industry and academics. The goal of producing critical breakthroughs inspires researchers to new levels of quality in their research and to faster advances in technology, and helps them quickly convert their findings into higher industrial productivity.

II. HIRP in Europe

2010 saw the launch of the first HIRP Flagship projects in Germany and the UK as the projects were a perfect match for the company's Europe strategy. Eleven medium- to long-term projects were initiated with European institutions, including the University of Kaiserslautern, Technical University of Berlin, FAU, University of Cambridge, and University of Southampton, with some receiving funding for up to six years. This continuity is highly valued, as it helps institutions nurture excellent talent and allows for research into basic technologies. Subsequent HIRP funding beneficiaries include Manchester University, Technische Universität München, RWTH Aachen University, Heinrich Hertz Institute, Hannover University, Télécom ParisTech, EURECOM, and VTT.

In addition to access to continuous research funding, the benefits for academic partners include insights into industry challenges and the very latest technical demands. HIRP Flagship projects offer postgraduate students and postdoctoral researchers an excellent opportunity for first-hand experience in the development and implementation of new technologies.

Researchers believe that HIRP creates an open technology ecosystem thanks to very high levels of openness Huawei maintains with each research partner and also serving as hub for pre-eminent researchers of different technical orientations to spark off each other's work. Their appreciation in their own words:



- **Professor Mathar of RWTH Aachen University:** “The project was carried out in an open, friendly collaborative system. In regular, detailed discussions with the excellent scientists at Huawei, I received very good suggestions and support. They also helped me understand the latest developments in the industry.”
- **Principal investigator Filippo Fazi, University of Southampton:** “We also interact with Huawei's technical team and that's very valuable. If we say, ‘this is what we would like to do,’ they can give us details (as long as these are not confidential) of what other people they are collaborating with are working on, so we can map what’s going on elsewhere. They know people who can help on a specific technology and are very widely-connected, which is great for us.”
- **Romain Couillet of CentraleSupélec:** “As part of a collaboration with Huawei's French Research Centre (FRC), and within the scope of the HIRP initiative, the RMTin5G project with Huawei and CentraleSupélec aims at developing mathematical tools based on recent advances in random matrix theory for applications in future 5G systems. It is quite a fruitful experience to have the opportunity to work hand in hand with a leading wireless communications company. Their quite unique incentive to conciliate cutting-edge research and practical considerations by means of the FRC constitutes, I believe, a major asset in meeting tomorrow’s wireless communications challenges and beyond.”

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