TechInnovate Fellowship Programme

10 months full-time stipend-supported

Enabling technology innovators and innovations
Identify real needs... and invent solutions

NUI Galway invites you to:

TechInnovate Fellowship Programme
10 months full-time stipend-supported

College of Business, Public Policy & Law
College of Engineering & Informatics

This elite stipend-supported tax-free fellowship has been established to inspire and train the next generation of techpreneurs (entrepreneurial technologists), forming new companies and strengthening existing ones.

High-calibre Fellows are recruited to form 2-3 person interdisciplinary teams and participate in an intensive 10-month programme that goes from concept to product.

A unique team-based tech innovation programme
Technology trends and applications

The TechInnovate Fellowship covers entrepreneurial efforts related to a variety of emerging themes, including:

Social, Mobile, Cloud and Analytics

• Data mining and analysis in structured and unstructured online media repositories and social networks
• Machine learning and big data
• Media analysis for e-commerce
• People-aware and mobile computing
• Media-related software

Smart Cities and the Internet of Things

• Comprehensive building design and built environment
• Building, infrastructure, and urban scale information processing
• Transportation systems optimisation, operation and management
• Sensor- and data-processing for smart buildings and factories

Security

• Cybersecurity, security protection programs for IT/control systems
• Security by design and hardware protection mechanisms
• Biometrics, facial recognition, iris recognition
Have you ever heard of William Higinbotham? In 1958, when he was Head of the Instrumentation Division at Brookhaven National Laboratory (for US nuclear research), Higinbotham invented the world’s first video game (“Tennis for Two”) to entertain visitors to the Laboratory. He reputedly expressed regret that he would more likely be famous for his game than for his work on nuclear nonproliferation. He did not patent his invention.

NUI Galway has a long and impressive tradition in the field of technology, from our beginnings to the current day. George Johnstone Stoney, who proposed the term “electron” to describe the fundamental unit of electrical charge, was Professor of Natural Philosophy at the University from 1852 to 1857. Semantic Web technologies developed at Insight (DERI), are used on thousands of websites around the world, including many government systems. John Ryan, who studied at the University, is founder of multi-billion dollar company Rovi (Macrovision). Also, the University has ranked in the top 101-150 for Computer Science/Information Systems and 151-200 for Electronic Engineering in recent years.

What is the Future of Technology?

Worldwide tech spending is about €2.5 trillion, with “Third Platform” technologies driving this spend. This new technology platform is expected to dominate the market by 2020, and is characterised by a disruptive convergence of cloud computing, mobile devices and smaller electronics, social technologies, big data analytics, smart and green IT, the Internet of Things, and improved security for all of the above.

Invent the Future as a Technology Entrepreneur

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Identify... Invent... Implement...

How many potentially world-changing inventions are still gathering dust? Many great ideas have foundered for want of better business skills. Some of the most successful inventions of our age combined technical and business knowledge.

At NUI Galway, TechInnovate Fellows will learn how they can develop their technical idea into a real company. In the first five weeks of the 10-month programme, team members will learn the fundamentals of how to build a startup, with lectures from a teaching team who have built and founded companies. Even more importantly, Fellows will learn by getting out of the classroom and talking to customers and partners, with eight weeks of immersion in a particular domain to find needs.

...Iterate, pivot, succeed

A key feature of the development of the Smart Economy is the necessity to build “the innovation or ‘ideas’ component of the economy through the utilisation of human capital - the knowledge, skills and creativity of people - and its ability and effectiveness in translating ideas into valuable processes, products and services.”*

This development presents Irish universities with new challenges and opportunities. It heralds in a new age, an age when the indigenous entrepreneur will play a key role, but particularly, an age when opportunities for the technologically-savvy entrepreneur will be immense.

Ireland’s economic future lies in the creation of Irish-owned companies designing innovative products for worldwide markets. Irish techpreneurs must be at the centre of this development.

At NUI Galway, we have created a new fellowship to answer these challenges and respond to this mission:

TechInnovate Fellowship Programme

Who should apply?
Candidates in the areas of engineering, information technology, design, law, and business must have completed an undergraduate degree in their area and should hold a postgraduate qualification or have equivalent professional experience.

Fellowship resources
Over the 10-month programme, our Fellows will receive a tax-free stipend. Additional benefits include formal and informal entrepreneurial training and mentoring, a workspace, and administrative support. The programme has an associated postgraduate award of a Higher Diploma in TechInnovation.

What are the expected outputs?
The expectation is that a successful Fellow will identify a real-world problem requiring an insightful technological solution, implement the solution, demonstrate its commercial viability and even obtain venture-capital funding to continue to pursue commercialisation (post-programme). Therefore, deliverables should include the new startup businesses themselves, licenses, Enterprise Ireland funding proposals, and business models ready for first-stage investment. Domain areas include tourism, agriculture, marine, fintech, defence, manufacturing, environment, transport, logistics and retail.

Your application
- Curriculum vitae
- Opportunity statement about real-world problem
- Essay detailing personal background, your passion, values, past entrepreneurial experiences, and how you intend to build a team and realise your vision

Quote
“This unique programme in TechInnovation is an important and novel multidisciplinary fellowship designed to create a new type of entrepreneurial technologist for Ireland. I believe that this team-based programme will equip Fellows strongly with the requisite skills in technology, business and innovation to enable them succeed in the “smart economy” and harness technology of the future.

Whether as startup entrepreneurs or within medium and large technology-focused companies, I believe that TechInnovate alumni will become key drivers of the digital economy.”

Dr. James J. Browne, President, NUI Galway
Access to Expertise and Customers
An essential asset for all TechInnovate participants

Lean Startups
Fellows will have strong exposure to the concepts of lean and agile, and will have access to the following business-related startup expertise:

• Business model canvas
• Agile and lean startups
• Funding, investors, bootstrapping
• Customer research and validation
• MVPs and product execution

Emerging Tech R&D
The Fellow will have access to world-class research institutes who are researching next-generation technologies in NUI Galway, including:

• Insight (Data Analytics/Big Data/ Semantic Web/Linked Data)
• LERO (Software Engineering)
• EVOSS (Evolving Open Software and Lean/Agile Approaches)
• ICHEC (Supercomputing)

Customers and Other Stakeholders
The Fellow will be connected to a range of potential customers through the University and its Technology Transfer Office, along with Enterprise Ireland and the IDA.

Technology Bootcamp
TechInnovate Fellows will have the opportunity to learn from a variety of experts on technology-related subjects through a series of invited talks and small group discussion sessions, with topics including:

• User experience and interface design
• Tech IP, licenses and legal aspects
• Getting things done, collaboration
• Baking in analytics from the very start

Mentors
Mentors are typically experienced entrepreneurs or investors that are assigned to each team, drawn from a pool of successful alums and the local technology ecosystem, which includes companies like:

ALISON
Altocloud
Avaya
Cisco Systems
Fintrax Group
Fotonation
Game Golf
Hewlett Packard Enterprise
IBM
Netfort Technologies
OnePageCRM
Rivada Networks
Schneider Electric
Storm Technologies
Valeo Vision Systems

In 1921, 14-year-old Phil Farnsworth while mowing hay in rows on his father’s Idaho farm realised that an electron beam could scan a picture in horizontal lines. This would later prove to be a critical breakthrough in Farnsworth’s invention of the television. In 1927 Farnsworth applied for a patent for his image dissector.

Around the same time a major American corporation, which had spent more than $10 million on a TV R&D effort, announced the launch of commercial television though the company did not have a single TV patent. Later that year, they were compelled to pay patent royalties to Farnsworth Radio and Television.

“Based on the success of the BioInnovate Ireland initiative, and also drawing inspiration from entrepreneurship programmes around the world, we have designed this programme with a holistic approach towards developing successful tech enterprises. Our teams will have the best possible combination of technical know-how, business skills and training in new enterprise development and innovation. This course will provide Fellows with real hands-on learning about what it is actually like to start an advanced technology company. They will speak to customers, partners in the field, and others to find out if anyone will want to use their product. If not, they will learn how to iterate and pivot if necessary to build something that customers will actually want to buy.”

Dr. John Breslin
Senior Lecturer and Startup Founder

Dr. Breslin has co-founded four companies including boards.ie, adverts.ie, and iPad app company StreamGlider, and advises many other tech startups.

Quote
Fellowship Programme: TechInnovate

A multidisciplinary programme for Ireland’s future techpreneurs

• Identify
• Invent
• Implement
• Iterate

Invent the Future... ...from Domain Needs to Tech Innovations
The recently built 14,000 m² Engineering Building, a state of the art riverside engineering teaching and research facility, and the JE Cairnes School of Business Building right next to it, are home to the TechInnovate Fellowship Programme at NUI Galway.

Contact:
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