**St.Paul's College Raheny student picks up top prize at SciFest 2013**

*Winner to represent Ireland at the Intel International Science and Engineering Fair (ISEF) 2014 in Los Angeles-*

**Friday November 22nd -** Raheny student Paul Clarke, picked up the top prize at SciFest@SFI Discover 2013 this afternoon. Paul has solved a problem related to the Travelling Salesman Problem, which has been baffling mathematics since the 1930s. His discovery has taken us a step closer to solving the Travelling Salesman Problem, also known as the Hamiltonian Cycle Problem, which has applications in business models including computer routing and networking. Professor Mark Ferguson, Director General of Science Foundation Ireland and Chief Scientific Adviser to the Government presented Paul his prize – the SciFest@SFI Discover Award and a trip to Los Angeles where he will represent Ireland at the *Intel International Science and Engineering Fair (ISEF) 2014.*

Over 15 projects were exhibited in the Science Gallery today and all students received an Excellence in STEM plaque by Professor Ferguson.

Paul adopted a theoretical approach with a focus on theorem-proving techniques to develop an algorithm for the Hamiltonian cycle problem. He presented the final algorithm using the Python programming language. Paul also reported on the application of his results in other areas of computer science and maths. He also investigated a number of other problems, including the traveling salesman problem and the problem of counting Hamiltonian cycles in graphs.

SciFest@SFI Discover gives the winning projects from each of the regional SciFest@College fairs an opportunity to showcase their projects at the Science Gallery, Trinity College Dublin.

Sheila Porter, SciFest Project Manager said:

*"Great science is characterised not by rote-learning and memorisation but by creativity and investigation. The aim of SciFest is to create a science fair experience that is inclusive,*

*accessible and inspires excellence. SciFest is a celebration of STEM subjects. It encourages students to push the boundaries of the classroom, use their knowledge of science, investigate and be creative in their projects. SciFest provides teachers with an opportunity to promote STEM in the classroom in an interesting, innovative and hands-on way. Furthermore, participation in SciFest supports not only the objectives of the current Junior Cert science syllabus but also the development of the key skills identified as central to learning in the new Junior Cycle curriculum.*

*"The opportunity to participate in SciFest@SFI is recognition of the hard work and dedication that these students put into their projects. For Paul the journey is only just beginning as he will have the honour of representing Ireland at next year's Intel International Science and Engineering Fair in the US and I wish Paul the best of luck for that event! "*

Professor Mark Ferguson, Director General of Science Foundation Ireland and Chief Scientific Adviser to the Government said: *"We are seeing a steady rise in the numbers of students selecting science and related courses at third level and this is also reflected in the increased participation in SciFest, year-on-year. Encouragingly, 2013 saw close to 5,300 students from 230 schools exhibit their projects at regional level in ITs and schools around the country, and the 15 projects exhibited here today are of a very high standard. The students exhibiting today represent the brightest young science minds in the country; they have excelled at their respective SciFest@College events and are already winners in their regions. All students should be extremely proud of themselves for reaching this stage of SciFest. Paul's project was exceptional and it shows how good students are at thinking outside the box and most importantly that science can be exciting! I congratulate him on his success today and I am confident that he will do Ireland proud at the International Science and Engineering Fair."*

Brendan Cannon, Corporate Affairs Director, Intel Ireland remarked that '*SciFest creates opportunities for students to work cooperatively with others on areas of local, national and/or global scientific and engineering interest. Through participation at SciFest events students develop skills sets that will inspire and shape the next generation of creative problem solvers and entrepreneurs. Such skills set will be required to address future global concerns of food, water and energy security, create wealth to sustain growth and provide better health services and better infrastructure.*