



Women in  
Science & Engineering Research

# Annual Report

## 2011- 2012

Centre for Women in  
Science and Engineering Research

20 Westland Row,

Trinity College

Dublin 2

*“Our vision is of an innovative,  
inclusive and world-class  
research community in which  
women and men participate fully  
at all levels and are recognised  
equally for their contributions.”*

# Contents

Contents.....	2
Introduction .....	3
Mission Statement.....	3
Data on women academics & researchers .....	5
WiSER on the world stage.....	8
Helsinki Group on Women in Science.....	8
INTEGER .....	8
TWIST .....	10
Travel .....	12
WiSER Core Activities.....	13
Seminar and workshop series.....	13
Springboard.....	14
WiSER Contact Points.....	14
Networking Events.....	14
WiSER Writing Groups .....	15
Attendance.....	16
Communications.....	17
Website.....	17
Social Media.....	18
Administration & Staff .....	19

# Introduction

Increasing the participation of women in science, engineering, technology and mathematics (STEM) is vital to Ireland's ability to compete internationally in STEM research.

Greater involvement by women in STEM research will not only provide increased numbers of skilled researchers, but crucially will also add a different perspective to STEM research; increasing diversity, enhancing creativity and driving greater innovation.

**The Centre for Women in Science and Engineering Research (WiSER)**, Trinity College Dublin was established in 2006 to identify and address the causes of the continued underrepresentation of women within science, technology, engineering and mathematics (STEM) disciplines in Trinity College Dublin.

The purpose of this report is to provide an overview of the key activities and achievements of the Centre for Women in Science & Engineering Research (WiSER) over the course of the 2011-2012 academic year.

## Mission Statement

WiSER's mission is to pursue scientific excellence by ensuring that women's expertise, knowledge and potential are harnessed to fully contribute to a diverse, innovative and productive scientific community of global consequence at Trinity College.

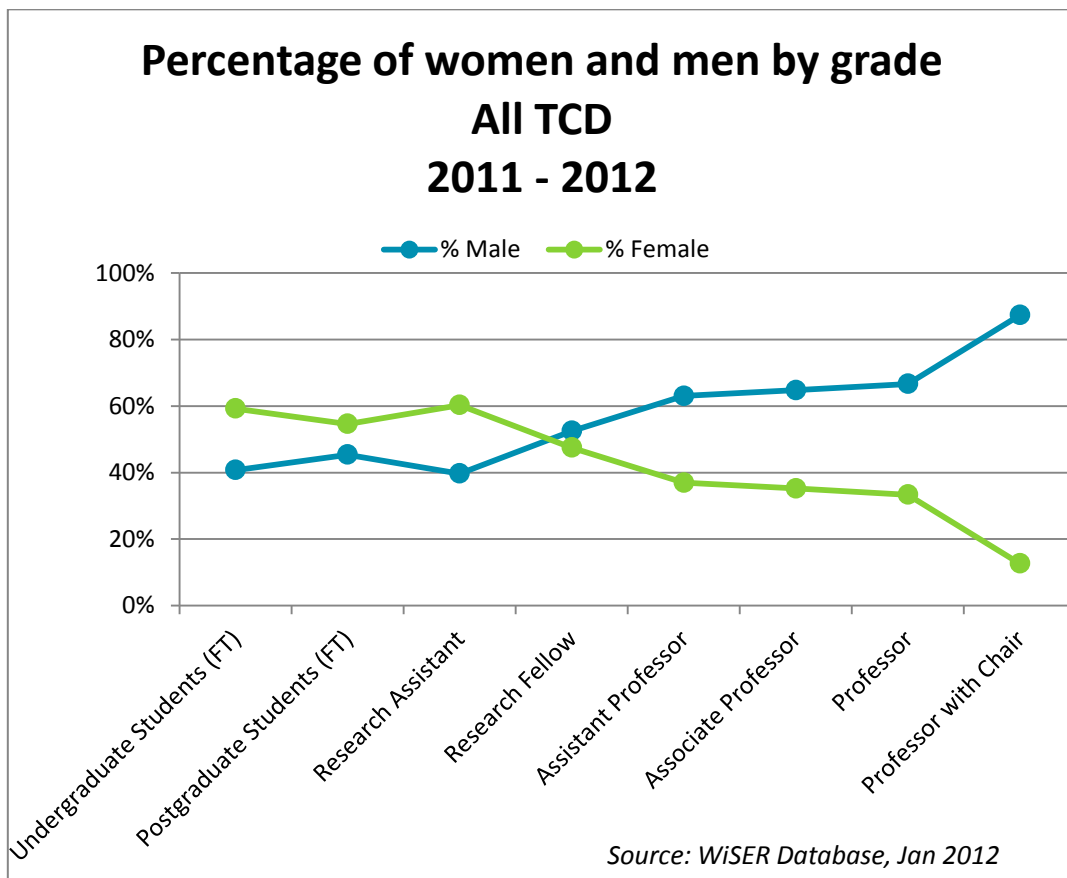
To realise this mission, WiSER aims to:

- Monitor & report annually on the position of men and women in STEM.
- Increase the retention of women by providing direct support to women researchers and academics in STEM.
- Advocate for an environment in which highly-skilled women scientists have access to the opportunities and support necessary to advance to senior and decision-making positions
- Enhance a sense of community within the workplace and the field as a whole by facilitating networking amongst the vibrant population of scientists
- Stimulate institutional and cultural change to create a gender-balanced and innovative working environment.

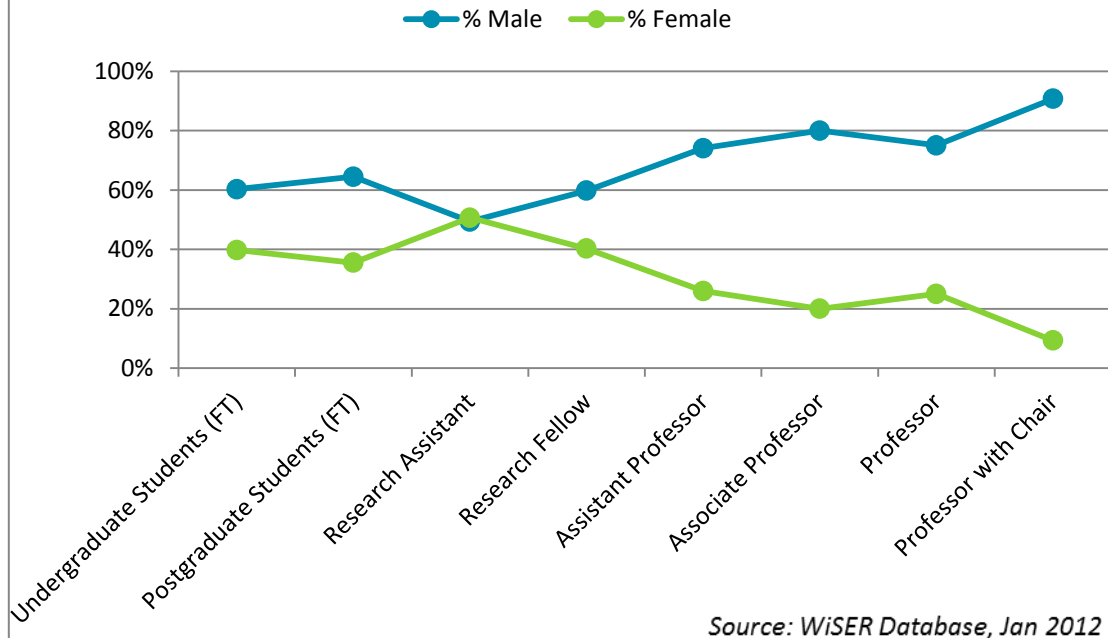
# 2011 – 12: Year in Review

# Data on women academics & researchers

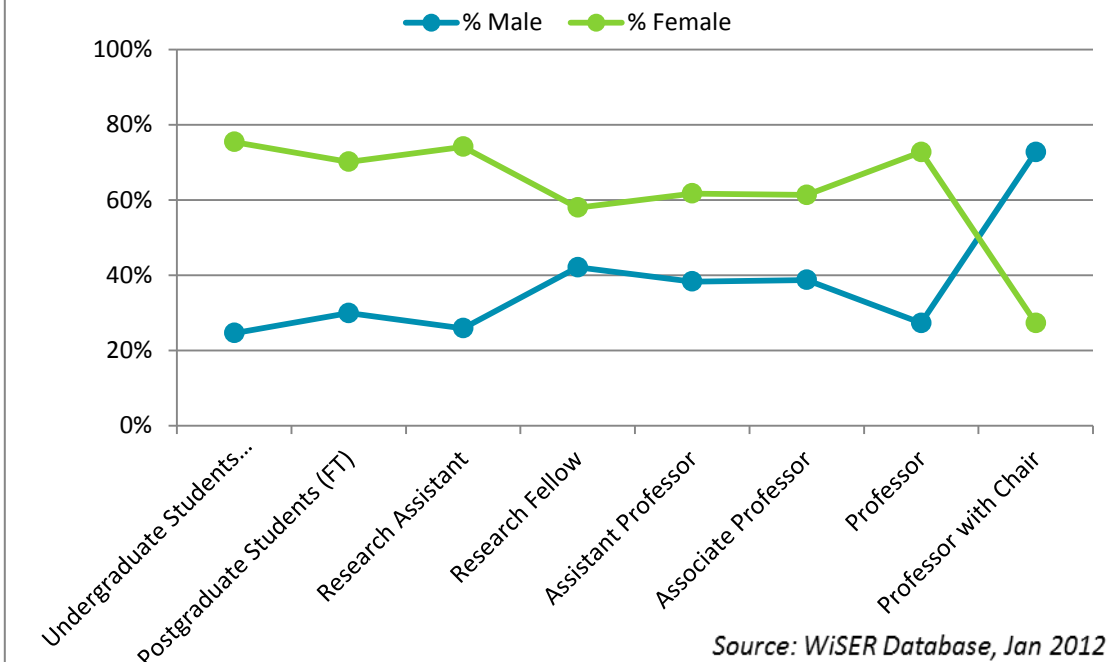
WiSER collects gender disaggregated statistics regarding the number and status of women academic and research staff in College, and reports annually on these data. This section contains figures for the percentage of women and men at each grade level for each of the faculties within Trinity College, and for College as a whole.



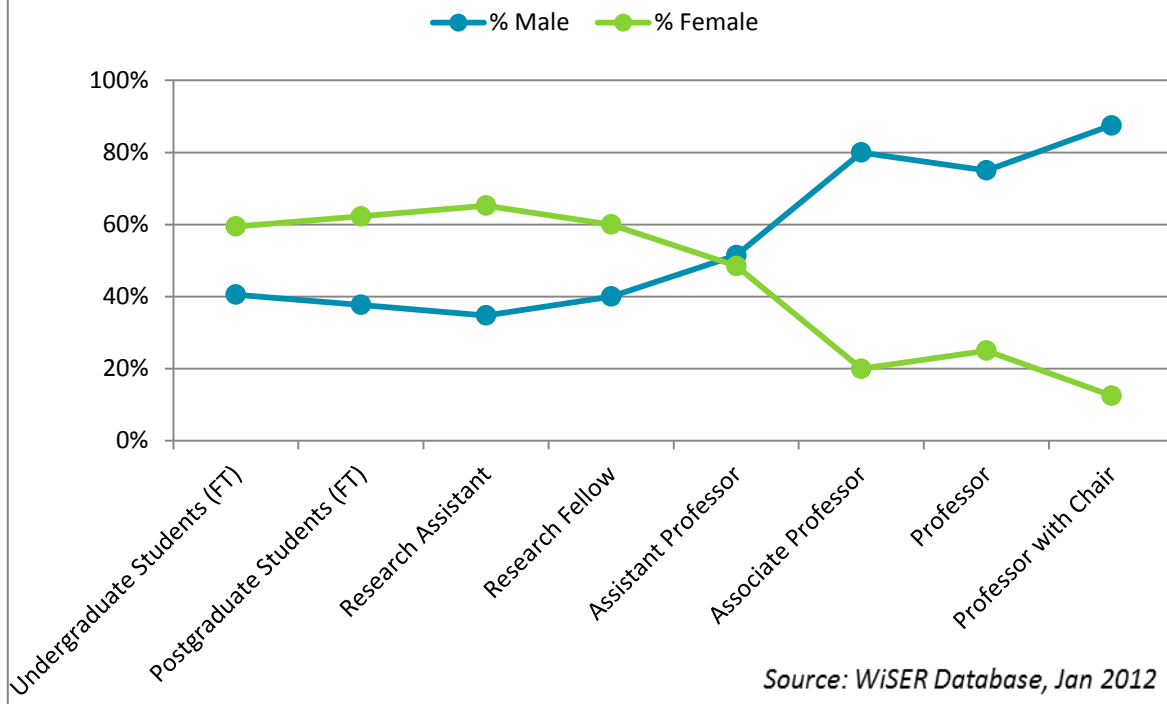
## Percentage of women and men by grade Faculty of Engineering, Maths and Science 2011 - 2012



## Percentage of women and men by grade Faculty of Health Sciences 2011 - 2012



## Percentage of women and men by grade Faculty of Arts, Humanities and Social Sciences 2011 - 2012





# WiSER on the world stage

An enduring priority for WiSER has consistently been to connect and collaborate with leading figures in Europe and internationally who are advancing the status and position of women in STEM. In the 2011 – 12 academic year, new partnerships were formed and WiSER's work was presented to new audiences in several countries. This section details these activities.

## Helsinki Group on Women in Science

### Irish National Representative

Recognising the need to put the women and science debate on a policy footing, the European Commission established a group of national representatives responsible for women and science issues in both European Union Member States and countries associated to the Framework Programme in November 1999. In 2010, the Director of WiSER was appointed as the Irish national representative, and remained as such during the 2011-12 academic year.

## INTEGER

### Institutional Transformation for Effecting Gender Equality in Research



WiSER and European partners were successfully funded by the European Commission through the Seventh Framework Programme (FP7) for a €3.2 million, four-year INTEGER project which commenced in March 2011.

WiSER is partnered with the Centre National de la Recherche Scientifique (CNRS), France, Siauliai University, Lithuania, and the Centre for Excellence for Women in Science, Germany (GESIS) which serves as independent evaluator.

INTEGER aims to develop and implement **Gender Action Plans** in research and higher education institutions to create sustainable **Transformational Change** that will improve the career progression of women scientific researchers.

**Transformational Change** is a strategic means by which all institutional decision-making considers the impact of decisions on men and women research staff. By embarking on transformational change, research institutions demonstrate a level of gender awareness and the competency to use gender as a resource in creating new knowledge and stimulating innovation through improving the organizational culture.

## INTEGER Highlights 2011-12

### Partnership Group Meeting

The inaugural meeting of the INTEGER Partnership Group took place in Paris in January 2011, attended by Prof Alain Fuchs, President of CNRS, Prof Clive Williams, Dean of the Faculty of Mathematics and Science, TCD, and Prof Vidas Lauruska, Rector of Siauliai University, Lithuania, along with the WiSER Director and INTEGER partners and ambassadors.



Image copyright: audiovisual service of the delegation CNRS Paris Michelangelo

From left to right: Pascale Bukhari, Virginija Sidlauskienė, Di Barber, Vidas Lauruska, Eileen Drew, Anke Lipinsky, Alain Fuchs, Paul Walton, Clive Williams, Caroline Roughneen, Teresa Rees, Jane Butcher, Anne Pépin, Alice Hogan

### Ambassador Lecture

**Professor Paul Walton, York University (UK)**

#### **“Creating Opportunities to achieve Excellence: *The York Experience*”**

In January 2012, Prof Paul Walton of York University, at the invitation of the Centre for Women in Science and Engineering Research (WiSER) delivered a guest lecture to the Faculty Dean, Heads of Schools and over 40 members of academic staff from the Faculty of Engineering, Maths and Science. Prof Walton described how, why and what happened when York University’s School of Chemistry made the conscious decision to address the under-representation of academic women in their department.

## **INTEGER Lecture**

**Professor Ruth Emerek, Aalborg University (Denmark)**

### **“The First Steps into a ‘Leaky Pipeline’ – A Longitudinal Study of the Pipeline within a Danish University”**

Prof Ruth Emerek visited Trinity College in May 2012 and presented her extensive research documenting the decline in the proportion of women the higher one looks among the levels of academic position. Building on earlier studies uncovering the ‘leaky pipeline’, a phenomenon whereby an increasing proportion of women among university graduates has not resulted in their increasing representation among university academics, Prof Emerek’s longitudinal analysis of data from Aalborg University, documented that women leak from the ‘pipeline’ at the very first steps of the career ladder.

## **INTEGER Lecture**

**Professor Helga Nowotny, European Research Council**

### **“European Research Council: Strategies for Incorporating Gender Policy in Research”**

In May 2012, Prof Nowotny addressed a WiSER event in TCD to discuss the strategic efforts by the European Research Council to incorporate gender policy into research practice, and to explore how the lessons learnt can be transferred to national and international research funding bodies.

## **Site Visits to INTEGER Schools**

**Oxford Research & Policy (Oxfordshire, UK)**

In June 2012, Dr Sean McWhinnie and Ms Caroline Fox of Oxford Research & Policy conducted site visits to the two INTEGER pilot Schools: Chemistry and Natural Sciences. They met with a cross-section of staff from all grades within the Schools and assessed the culture and management practices to provide independent, objective feedback. A comprehensive report and recommendations were drawn up respectively for each School and for College as a whole, and these informed the development of the INTEGER Transformational Gender Action Plans.

**TWIST**

**Towards Women in Science and Technology**



TWIST, the €2.5 million Seventh Framework Programme project funded by the European Commission, commenced in 2010 and saw WiSER partnered with science centres and museums across eight countries.

The aim of TWIST is to challenge the general public's perception of *who* carries out scientific research and *how* it is carried out. Over the course of the project visitors to the science museums were encouraged to discuss whether there is a gendered perception of science and scientists, and how biological, social and cultural constructs impact on these perceptions.

Partners in the TWIST project are:

<b>Science Museums</b>	
Experimentarium	Denmark
Fondazione IDIS	Italy
NEMO	Netherlands
The House of Experiments	Slovenia
Teknikens Hus	Sweden
Bloomfield Science Museum	Israel
<b>Other Partners</b>	
Kings College London	United Kingdom
ASDO	Italy
European Network for Science Centres & Museums	Europe
Centre for Women in Science & Engineering Research (WiSER)	Ireland

## TWIST Highlights 2011-12

### **“A WiSER Vision for the 21<sup>st</sup> Century Workplace”**

Ireland is currently facing challenges, and yet there are also great opportunities on the horizon. Research and innovation have been identified as core drivers of recovery, and Ireland requires a highly-skilled, talented and dynamic workforce to meet the demands of the 21st century global landscape.

On the occasion of International Women’s Day, 8<sup>th</sup> March 2012, WiSER and the Science Gallery brought together 30 women from industry, academia and politics to create a vision for the workplace of the future. The women, who all had STEM backgrounds, worked in groups first to analyse the makeup and practices of their current workplaces, and then to generate ideas for creating a workplace in which men and women alike have opportunities to achieve excellence at the highest levels. The result was the creation of a charter calling on organisations and employers to commit to ten key principles.

### **A WiSER Vision for the 21st Century Workplace**

1. Provide options for flexible working hours and part-time work to all staff without endangering their career progression
2. Evaluate staff based on performance and results achieved rather than on number of hours worked
3. Implement family friendly policies for men and women.
4. Promote female role models
5. Employ a temporary quota of 50:50 women: men at leadership levels.
6. Introduce transparency on salaries
7. Achieve transparency on promotion criteria
8. Arrange on-site childcare
9. Facilitate staff with a work from home option
10. Ensure recruitment and interview processes are gender blind

## Travel

The year 2011 – 2012 saw WiSER make use of substantial opportunities for international engagement and dissemination. The WiSER Director was invited to speak at and/or attend conferences and meetings in Paris, Brussels, Warsaw, London and Amsterdam, among others.

### **European Gender Summit**

*genSET, Brussels*

*8th-9th November 2011*

Ms Caroline Roughneen, Director of WiSER, and Prof Eileen Drew (joint PI of the INTEGER Project), attended the first European Gender Summit along with over 200 organisations to explore how the gender dimension stimulates excellence and innovation in R&D&I and observe examples of effective gender equality programmes. The meeting focused on five priority areas: Enhancing Research Quality; The Culture of Innovation; Promoting Structural Change; Gender and Innovation; and Defining Policy.

### **European Strategy Seminar**

*French Ministry for Higher Education and Research, Paris*

*19<sup>th</sup>-20th December 2011*

The WiSER Director was invited to attend as the Irish representative of the Helsinki Group on Women in Science. Helsinki Group Members from Czech Republic, Cyprus, Denmark, Germany, Hungary, Italy, Norway, Portugal, Romania, Spain, Sweden, Switzerland and the Netherlands were also in attendance. The Seminar addressed the role of gender in the forthcoming Horizon 2020 programme, the relationship between the Helsinki Group and the European Commission, and strategic targets for research.

### **'Women in Research and Innovation' Campaign**

*European Commission, Brussels*

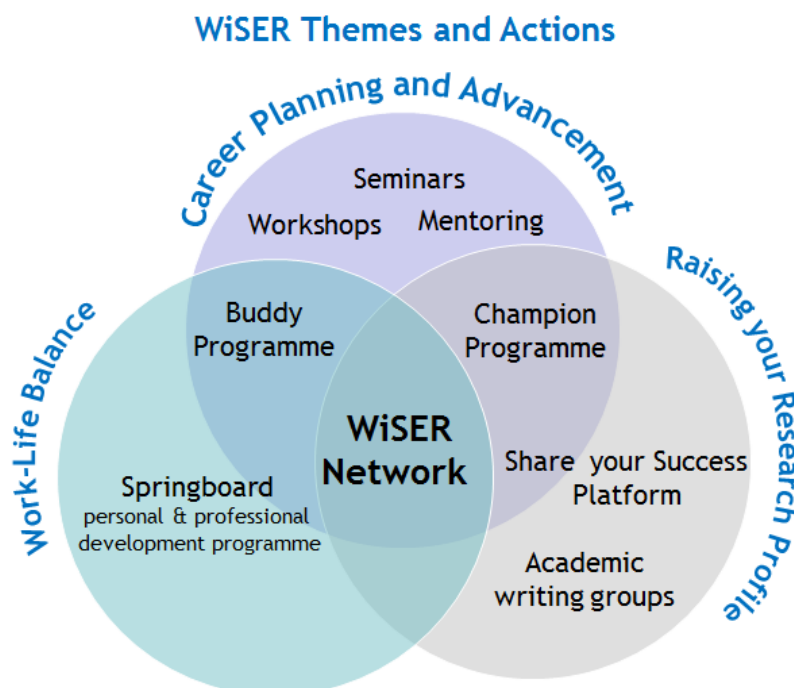
*21<sup>st</sup> June 2012*

The Director of WiSER was invited to attend the launch of a European Commission campaign to encourage more girls to take an interest in science at school and to engage young women in scientific research careers. The event took place at the European Parliament in Brussels. It was chaired by Máire Geoghegan-Quinn, the Commissioner for Research, Innovation and Science and also involved Members of the European Parliament.

# WiSER Core Activities

WiSER’s core activities combine the dual strands of individual skill development and institutional transformation in order to increase the competencies of researchers in synergy with a supportive environment.

While the annual programme of activities is designed in response to evidence regarding the needs of women researchers, men are also welcomed to many of the events.



## Seminar and workshop series

The on-going seminar and workshop series is designed with two primary goals in mind; namely to create discussion and provide training on relevant career-development topics, and as a networking opportunity to connect researchers and academics within the College community.

The wide variety of topics covered explore the ‘how-to’ of an academic career, informed by an awareness of the particular issues that impact on women’s careers in science, technology, engineering and maths, gathered from international research on the subject as well as directly from needs expressed by women in Trinity College.

The following seminars and workshops ran during 2011–12:

**“Harnessing the H-index, smart and effective use of publication and evaluation metrics”**

*19<sup>th</sup> April 2012*

*Facilitator: Ms Niamh Brennan, TCD Library*

The seminar covered publication and evaluation metrics and the practical ways in which they can be used to raise one’s research profile and strengthen promotion and grant applications.

**“A WiSER approach to research”**

*14<sup>th</sup> February 2012*

*Facilitator: Dr Fiona Blighe, WiSER*

This interactive workshop used small-group problem solving to address common challenges that arise during a research career such as publishing, funding, maternity leave, work-life balance, temporary contracts, being promotion ready and managing research output.

## Springboard

Springboard is an award-winning personal and professional development programme which enables women to take more control over their work and personal lives by identifying the practical steps they wish to take and developing the skills and confidence needed to take them. The course was delivered via two day-long workshops involving role-model speakers. WiSER has run Springboard annually since 2006.

## WiSER Contact Points

The WiSER Contact Point Programme was established in 2011 to create a direct line of dialogue between WiSER and Schools within the Faculties of Health Sciences (HS) and Engineering, Maths and Science (EMS). The initial phase of the programme saw seven women academics established as Contact Points within seven Schools in FEMS. The Contact Points and WiSER together hosted coffee mornings for women in each of the participating Schools.

## Networking Events

Networking is about connecting people. For women in academia it is also a means to reduce the sense of isolation that can occur for anyone who is the only woman in a given field, or one of a small number.

Responding to an identified need, WiSER networking events bring people together in an informal social context to connect ideas, resources and find support when it is required. A sense of

community is invaluable to the College environment and this is one way for women from different backgrounds, disciplines and career stages to come together.

Networking is a core element of all WiSER events including seminars, workshops, Springboard and the Contact Point coffee mornings. In addition to these, unique network activities are hosted to mark key events.

### **WiSER Showcase Event**

*7<sup>th</sup> December 2011*

The evening Showcase Event launched the WiSER programme of events for 2012. Attendees came from across College and the extended WiSER network. A storyboard format presented the multiple facets of the programme. Speakers at the event were the Dean of FEMS, Professor Clive Williams, and WiSER Director Ms Caroline Roughneen. The Dean emphasised the importance of working towards gender balance among leadership roles in College.



*Attendees at the WiSER Showcase Event, 7<sup>th</sup> December 2011*

## **WiSER Writing Groups**

The WiSER Writing Groups arose from research indicating that academics who participate in writing groups demonstrate consistently higher publication rates than those who do not.<sup>1</sup> The groups meet approximately once a month to read and review each other's writing. The groups allow members to

---

<sup>1</sup> McGrail, Matthew R., Rickard, Claire M. and Jones, Rebecca, 'Publish or perish: a systematic review of interventions to increase academic publication rates', Higher Education Research & Development, 25:1, 19 - 35



receive constructive feedback, provide an incentive to write, and alleviate the often solitary nature of academic writing.

WiSER and CAPSL together run these writing groups to allow members to receive constructive feedback on their writing, develop a stronger sense of self as a writer and helps alleviate the often solitary nature of academic writing.

### **WiSER Academic Writing Groups Seminar**

*13<sup>th</sup> June 2012*

*Facilitator: Dr Fiona Lithander, School of Medicine, TCD*

This seminar was held to introduce the concept of writing groups to academics and researchers who had not previously taken part in one, and to establish group for attendees on the day.

## **Attendance**

At least 213 women and men attended WiSER activities during 2011-12. While the target audience for most WiSER programmes is women researchers and academics within the Faculty of Engineering, Mathematics and Science, invitations are extended beyond this cohort where appropriate in accordance with the Centre's inclusive approach. The attendee profile for the present year reflects this practice, and while the majority of attendees belong within the target audience, others come from diverse backgrounds both within Trinity College and externally, and include men as well as women.

# Communications

WiSER employs a multi-strand communications strategy. During 2011-12 WiSER continued to expand its online presence through the use of the WiSER LinkedIn group, Twitter and WiSER website.

## Website

The WiSER website, <http://www.tcd.ie/wiser>, serves as a repository for a wealth of information about current and historical issues of relevance to women in STEM, as well as resources for women academics and researchers. It is also used to communicate information about upcoming WiSER events and relevant news.

As the following graphs show, despite fluctuations, there has been an overall upward trend in the number of visitors to the website over the past year.





## Social Media

### Twitter

WiSER maintained a modest but steady Twitter presence during the year, with a total of 95 tweets and 244 followers. Continuing to increase the effectiveness of WiSER's engagement with social media will be a goal for 2012/13.

### WiSER LinkedIn Group

WiSER set up a group on LinkedIn in 2009 as a means of connecting with women researchers and academics. The online group facilitates connections and discussions between women within TCD but also for those who have left and gone elsewhere within Ireland and abroad to maintain contact and collaborate. The group grew significantly over the course of this year, from 38 members at the start of July 2011 to 98 at the end of June 2012.

## Administration & Staff

Since 2010, WiSER has been under the remit of the Office of the Vice-Provost and is part of the Academic and Curriculum Development Unit. During the 2011-12 academic year the WiSER staff consisted of:

- Director Ms Caroline Roughneen
- Programme Manager Dr Fiona Blighe
- Executive Officer Ms Evelyn Murphy