



## CALL FOR PAPERS

### Special Issue of the *Journal of Technology Management & Innovation* on “The Gender Dimension in Technology”

Guest Editors: Dr. Marina Ranga and Prof. Henry Etzkowitz

#### **Special Issue Theme: The “Gender Dimension in Technology”**

The theme proposed for this Special Issue is a novel research area which, with a few notable exceptions (e.g. Thursby and Thursby, 2005<sup>1</sup>; Link, Siegel and Bozeman, 2007<sup>2</sup>) has been little explored in the literature. While there is a wealth of studies on the participation of women in science, especially academic science (Xie and Shauman, 2003<sup>3</sup>; Smith-Doerr, 2004<sup>4</sup>; Sonnert and Holton, 2006<sup>5</sup>), women’s presence, identities, barriers to entry and advancement in technology-related professions, such as technology transfer and entrepreneurship, are only little documented.

This Special Issue aims to present to the scientific, business and policy-making communities a concentrated and multi-faceted body of recent research, that has the potential to raise awareness on the increasing importance of gender in technology, broaden the current understanding of the dynamics and implications of the phenomenon, inspire new research projects in this and related areas, and disseminate good practice.

#### **Background**

In recent years there has been a significant shift in the focus of gender and technology research, from earlier studies on the scarcity of women in science (e.g. Rossi, 1965<sup>6</sup>) and the effects of office technologies (telephones, typewriters) that required inexpensive operators and the so-called ‘labour-saving household technologies’ that made women available for the labour market (Cowan, 1983<sup>7</sup>), to new developments in

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<sup>1</sup> Thursby, J. G. and M. C. Thursby (2005), Gender Patterns of Research and Licensing Activity of Science and Engineering Faculty, *Journal of Technology Transfer*, 30 (4): 343-353.

<sup>2</sup> Link, A. N., D. S. Siegel D.S. and B. Bozeman (2007), An empirical analysis of the propensity of academics to engage in informal university technology transfer, *Industrial and Corporate Change*, 16(4):641-655.

<sup>3</sup> Xie, Y. and K. A. Shauman (2003), *Women in Science: Career Processes and Outcomes*, Cambridge MA: Harvard University Press.

<sup>4</sup> Smith Doerr, L. (2004), *Women’s Work: Gender Equality vs. Hierarchy in the Life Sciences*, Boulder CO: Lynne Rienner.

<sup>5</sup> Sonnert, G. and G. Holton (2006), *Who Succeeds in Science? The Gender Dimension*, New Brunswick, Rutgers University Press.

<sup>6</sup> Rossi, A. (1965), ‘Women in Science: Why So Few?’, *Science* 148: 1196-1203.

<sup>7</sup> Cowan Schwarz, R. (1983), *More work for Mother: The ironies of household technologies from the Open Hearth to the Microwave*, New York: Basic Books.

technology areas requiring highly-skilled professionals, e.g. the growth of interface organisations such as technology transfer organisations, business incubators and science parks, the provision of resources and qualified people for such organisations, the pervasive spread of ICTs that in many cases helped narrow the digital divide, facilitated women's work from home and gave a new impetus to the creation of female-owned businesses (UN-ECE, 2004<sup>8</sup>), the large-scale introduction of flexible, part-time work schemes and parental leaves, with all their social and economic implications, both for employers and the employees (e.g. Mills, 2009<sup>9</sup>), the rise of gender and diversity issues both in business firms and academic institutions, etc.

These new developments arise from a "tectonic shift" in the relationship between science and the economy, which created not only new technologies and enterprises, but also new professions. An increasing number of female scientists from academia migrate to such science and technology-related professions, which offer new career paths and more favourable work conditions, especially due to the flexibility of the work hours that allows a better work-life balance, and the possibility to utilise their skills in new, cross-border occupational areas that go beyond the parameters of traditional single-gendered occupational roles. This trend may also be related to women academics' under-representation in the technology transfer performed by faculty members, be it through formal mechanisms (licensing agreements, research joint ventures and university-based start-ups) or informal (transfer of commercial technology, joint publications with industry scientists and industrial consulting) (Link, Siegel and Bozeman, 2007).

The gender dimension in technology transfer and entrepreneurship cuts across and raises new issues for research and policy-making in several innovation-related areas, such as business management, organizational change, human resources and sustainable development. As the intermediation among science and the economy becomes more significant as the basis of future economic development, women's movement into technology makes them increasingly important players in innovation.

By taking a closer look at the theme of gender in technology transfer and entrepreneurship, we aim to provide not only new theoretical and practical insights into this area, but also new materials that could be used in the teaching process of many universities. Teaching material in this area is still very limited, and includes only very rare examples of women in (high) technology entrepreneurship, academic spin-offs, technology transfer and business incubation. By providing relevant evidence on these themes, this Special Issue aims to be an original and path-breaking contribution to the development of both research and teaching material and the dissemination of good practice in these areas.

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<sup>8</sup> United Nations Economic Commission for Europe (2004), *Access to financing and ICT for women entrepreneurs in the UNECE region. Challenges and good practices*, Geneva and New York. Available at: <http://www.unece.org/gender/documents/Overview.pdf>

<sup>9</sup> Mills, E. (2009), Women have got greedy with maternity leave, *The Sunday Times*, October 18. Available at: <http://www.timesonline.co.uk/tol/comment/columnists/article6879270.ece> (accessed 27 October 2009).

### **Invitation to Contribute**

We invite you to contribute to this Special Issue by providing your analysis of “**The gender dimension of technology**”. You will join a distinguished international group of gender and technology experts and policy analysts in producing what we expect will be a landmark intellectual and policy benchmark. Possible topics to be addressed include, but are not limited to, those listed below:

- **Gender and technology transfer, business incubation and entrepreneurship** (e.g. rising numbers of women scientists leaving academia or industry to take up careers in these interface fields; construction of gendered identities within predominantly male-dominated work environments such as business incubators; how does technology transfer develop as an occupational field, what does a “career” in this area mean and what gender differences does it encompass; what best practices of gender equality exist in intermediary organisations in these areas and how can they be widely disseminated to benefit the work and careers of women; what is the impact of gender segregation in scientific research on technology entrepreneurship, etc.).
- **Gender in ICT and related professions** (e.g. increasing attrition among ICT female professionals in spite of optimistic predictions that ICT and related professions would create new employment opportunities for women; reasons for this decline and consequences of leaving the workplace on women’s work-life balance; traditional vs. new ways of constructing gender identities in these areas that are statistically male dominated, involving theoretical concepts such as emotional labour, hybridity and blended professionals).
- **Gender in the management of technology firms** (especially at the mid- to senior management level, which is a critical juncture for women on the technical ladder as the point of convergence of several gender barriers; the integration of female users’ needs into research and development processes, product development and adaptation to female users’ needs and preferences at an early stage of product design, introduction of gender-sensitive research concepts in applied research and in industry with potential of opening new markets).
- **Gender and strategies for technology-based national and regional development** (e.g. understanding the role of women in a national innovation and information society; measurement of the potential of different societal groups, including women, to contribute to the development of an innovative society; shift in the eligibility of local and regional development organisations for government funding to include gender equality and sustainable development criteria; institutional mechanisms to achieve these objectives, such as the Women Resource Centres (WRCs) in Sweden and the internationalisation of the process through the WINNET Europe network that brought together WRCs from 21 countries; actors and resources mobilised nationally and internationally; challenges faced by these organisations and policy response triggered by their activities).

- **Gender mainstreaming in national and regional innovation systems and triple helix partnerships** (Gender mainstreaming is to be understood as measures to integrate the issue of gender equality into all policy areas, scrutinizing social constructions of gender and their implications for women and men respectively. How can gender mainstreaming be introduced into a broad spectrum of actors and areas, in order to contribute to sustainable growth?).
- **Gendered structures in public innovation policies** (innovation measures have often been criticized for being ‘gender blind’, not acknowledging the gendered nature of the developments they promote. Primarily, men and male-dominated branches of industry have been ascribed leading positions in policies, and gender equality has not been considered when evaluating the results. Ironically, this has in some cases resulted in policies that emphasise former areas of strength, but fails to identify innovative areas).

### **Special events (to be confirmed)**

The authors of the papers included in this Special Issue will have the opportunity to present them at the **International Conference Triple Helix 8 (Madrid, October 2010)**, which will include a track on Gender and Technology. Further details on this track will be available shortly on the conference website <http://www.triplehelix8.org/information.html>

### **Important deadlines:**

Submission of full papers:	30 December 2009
Review:	30 January 2010
Decision on accepted papers:	10 February 2010
Online Publication:	15 March 2010

### **Instructions for authors:**

The papers should be submitted via website at: <http://jotmi.org/index.php/GT/author/submit/1>. The registration and login are required to submit papers online. Please, send an copy by email of your paper for this Special Issue to Dr. Marina Ranga ([marina.ranga@gmail.com](mailto:marina.ranga@gmail.com))

Editorial guidelines are provided on the journal website at: <http://www.jotmi.org/index.php/GT/about/submissions#authorGuidelines>