



How to Promote Gender Diversity in the HPC Community?

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By now we all know that...

Diversity isn't an altruistic aspiration; it's a competitive demand

(Bill Destler, 9th president of the Rochester Institute of Technology, USA)



Today

One of the many studies: A Massachusetts Institute of Technology study has found that changing from all-male or all-female workforces to equal numbers of both sexes could raise revenues by around **40%** (BBC news, The World Economic Forum).

However, The World Economic Forum gender gap report estimates that it would take **80 years** at the current pace of progress for women to achieve parity in the workplace (BBC news).



Why?

My six points summary to may be find an answer and improve on...



1. Wrong governmental enforcements to improve statistics

EXAMPLE:

In Sweden instead of improving the salary levels of women to equalize with men, the government wants **to force** an equal parental leave for both parents.

Give the chance to take an equal leave but don't force it!

As scientifically proven, this will have a negative impact on both mother's and child's health and eventually cost the state a lot of money.

2. Media Stereotyping: If someone would have shown or told me this....



My future colleagues



I am in the future

I would have never chosen to work in computer science and HPC... Luckily it is not the case

2. Media – the strongest weapon





3. Lack and fear of understanding male and female differences

- a. Male brains have more connections within each hemisphere, in female brains there are more connections *between* the two hemispheres. There is greater modularity in male brains, which explains why men learn and execute tasks in isolation better than women, who tend to excel in multitasking.

- b. Increased inter-hemispheric neural connectivity makes women generally more adept at intuitive thinking that involves coordinating analytical reasoning and intuition.



3. Lack and fear of understanding male and female differences

Women are therefore better at managing relationships, empathizing, articulating and expressing themselves creatively, and appreciating beauty.

Women have denser gray matter in the parietal cortex than men. This explains why women tend to be better at interpreting verbal cues; gauging what lies behind words and in what remains unuttered, remembering faces, and understanding gestures.

Abramov, I., Gordon, J., Feldman, O., & Chavarga, A. (2012). Sex & vision I: Spatio-temporal resolution *Biology of Sex Differences*, 3 (1) DOI: 10.1186/2042-6410-3-20

Gender diversity is not about fitting female into the men-like behavior but rather making fundamental changes in what “used to be the way of working for male”.



4. Lack of understanding of the “pleasure and fun” part in the everyday IT/ICT work

A simple example:

A doctor helps the patient to get cured from a pain or an illness.

A scientist gives the doctor a means for curing this pain or this illness of a patient

But only HPC expert/software expert can help the scientist to find the means to the cure of such illnesses as Cancer, HIV, AIDS, Alzheimer....or a replacement of an amputated body part

This is a simple but yet quite unknown fact for the general (children, women, men) public.



5. Underestimation of mathematical/ engineering abilities of women or overestimation of the same abilities of men

Female tend to underestimate their “hard science” abilities while men tend to overestimate these.

Kurt A. Heller and Albert Ziegler “Gender Differences in Mathematics and the Sciences: Can Attributional Retraining Improve the Performance of Gifted Females?”

doi: 10.1177/001698629604000405



6. Lack of information on possibilities to combine creativity and intuition with work in IT/ICT

Intuition lies in the core of mathematics, creativity lies in the core of programming

– but there have been very little invested efforts in showing and proving it to the general female audience.

Reading, exploring, challenging, managing, coordinating, communicating, researching and finally creating

- is what our work is about in IT/ICT



Six points that may improve the gender diversity in IT/ICT

1. Frequently wrong governmental enforcements to improve statistics
2. Wrong media stereotyping from children cartoons to adult films and blogs
3. Lack and fear of understanding male and female differences
4. Lack of understanding of the “pleasure and fun” part in the everyday IT/ICT work
5. Underestimation of mathematical/engineering abilities of women or overestimation of mathematical/engineering abilities of men
6. Lack of information on possibilities to combine creativity and intuition with work in IT/ICT

Thank you!