Gender Mainstreaming and ICTs

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International Network of Women Engineers and Scientists (INWES)
World Federation of Engineering Organizations (WFEO)
Committee on Women in Engineering (WIE)
Committee on Information and Communication (CIC)
Committee on Engineering for Innovative Technologies (CEIT)

The Committee for Women in Engineering (WIE) has given women engineers across different continents an opportunity for knowledge sharing across all disciplines of engineering thereby positioning the women engineer for better professional delivery.

The main duty of the Committee on Information and Communication (CIC) is to help lead forward Information and Communication Technology in order for it to be applied globally, and focuses on developing countries where narrowing the gap has become essential.

The Committee on Engineering for Innovative Technologies (CEIT) has set its objectives in the area of technological advancements to identify and promote suitable technologies for sustainable development, especially in the context of the UN Sustainable Development Goals.
Female students in STEM are intimidated in the laboratory or in classes because they are female.

*Source: APNN–INWES Survey*
Marriage, pregnancy or child care have the same effect on scientists/engineers regardless of their sex for their study, research or project performance.

Source: APNN–INWES Survey
I believe things will turn out fine in the future career for women in STEM

<Figure A3-13 Comparative values for question 3 by APNN Countries (Female and Male)>
Blue bars (above) represent data for female, red bars (below) represent data for male.

Source: APNN–INWES Survey
It is crucial to have strong policy support to solve gender inequality in the STEM field.

Source: APNN–INWES Survey
Monographs / Publications: The following four publications are under preparation of which two are at an advance a stage and should be ready for issue around July 2019.

1. Agriculture 4.0: Knowledge Driven Developments in Future Farming
2. Re-inventing Engineering Education in a Digital World
3. Student-Built Satellite Missions: World Landscape
4. The Future of IoT in Growth Economies

Views/Suggestions may kindly be sent to.

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S.S. Rathore
Vice President, WFEO and Past President, The Institution of Engineers (India)

WFEO-CIC Secretariat
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Web: http://www.ieindia.org

WFEO-CIC SEMINAR
FURTHER ADVANCES IN SMART CITIES

Venue:
The Fern Hotel
Ahmedabad

Date: 6th July 2019

Brochure of International Seminar at Ahmedabad
International Seminar on “Industry 4.0” on 12th July 2018, Malaysia.

Around 323 delegates including delegates from Malaysia, 72 delegates from other FEIAP countries and more than 100 students from UTAR University Tuanku Abdul Rahman, Polytechnic Ungku Omar, Pro skills Academy, Equator College and University Teknologi Petronas attended. Students were not charged any fee and WFEO-CIC bore the entire cost.
Special Lectures on “Smart Cities” & “Digital Experience—use of ICT
An International Meet was held on 20th December 2017 at Chennai, India, wherein representatives of several countries including FEISCA countries attended. They were briefed on activities of WFEO-CIC.
The World Construction Forum 2019 was held in Ljubljana, Slovenia, from 8th to 11th, April. There were approximately 700 participants from 51 countries from five continents visited World Construction Forum. The Ljubljana Declaration was released at the end of this forum with the goal of contributing to the UN Sustainable Development Goals Agenda 2030.

Prof. Ke GONG, the President-Elect of WFEO, and Dr. Jing PENG, the Executive President of WFEO-CEIT and WFEO-CEIT secretariat participated in this two-day forum as well as the WFEO-related meetings, in which Dr. Peng briefed the participants on the activities in 2018 and plans for the near future.
Publications

Human Values and Ethics for Engineers and Professionals

Kameshwar Singh Verma

Healthcare Information Technology
The Indian Scenario

Prof. K. Ganapathy

Monograph on Human values and Ethics for Engineers and Professionals

Monograph on Healthcare Information Technology
UPCOMING EVENTS

World Intelligence Congress (WIC)
16-19, MAY, TIANJIN, CHINA
http://www.wicongress.org

Engineering and Food Security in Africa
24-25, JUNE, TUNIS, TUNISIA
http://efsafrica.org/en/

World Robot Conference (WRC)
20-25, AUGUST, BEIJING, CHINA
http://en.worldrobotconference.com

World Engineers Convention (WEC2019)
20-22, NOVEMBER, MELBOURNE, AUSTRALIA
https://www.wec2019.org.au
Early Bird Registration: by 10 May, 2019
Industry 4.0

1. Digitisation and integration of vertical and horizontal value chains

2. Digitisation of product and service offerings

3. Digital business models and customer access

Data & Analytics as core capability

Mobile devices

Cloud computing

IoT platforms

Augmented reality/wearables

Location detection technologies

Advanced human-machine interfaces

Multilevel customer interaction and customer profiling

Big data analytics and advanced algorithms

Authentication & fraud detection

Smart sensors

3D printing

Source: PricewaterhouseCoopers International Limited
THE ASEAN ICT Master Plan 2020

Propelling ASEAN towards a digitally enabled economy that is secure, sustainable, and transformative; and enabling an innovative, inclusive and integrated ASEAN Community.
The AEC Blueprint 2025 aims to strengthen and reinforce the following five characteristics of the ASEAN Economic Community by 2025:

- A Highly Integrated and Cohesive Economy;
- A Competitive, Innovative, and Dynamic ASEAN;
- Enhanced Connectivity and Sectoral Cooperation;
- A Resilient, Inclusive
THE ASEAN ICT MASTERPLAN 2020

The vision for the AIM 2020 is to propel ASEAN towards a digitally-enabled economy that is secure, sustainable, and transformative; and to enable an innovative, inclusive and integrated ASEAN Community.
ASEAN Connectivity 2025

Vision: “To achieve a seamlessly and comprehensively connected and integrated ASEAN that will promote competitiveness, inclusiveness, and a greater sense of Community.”
Gender Perspective in Digital Government Development
Perception of women engineers on several issues related to their jobs and working environment

<table>
<thead>
<tr>
<th>Issue</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opinion are not accepted because of female</td>
<td>25.3%</td>
<td>74.7%</td>
<td></td>
</tr>
<tr>
<td>Experienced sexual harassment</td>
<td>13.6%</td>
<td>86.4%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Experienced sexual discrimination</td>
<td>21.7%</td>
<td>78.3%</td>
<td></td>
</tr>
<tr>
<td>Superior deprive you of attending any meetings</td>
<td>19.5%</td>
<td>80.5%</td>
<td></td>
</tr>
<tr>
<td>Consider as independent individual</td>
<td></td>
<td>94.0%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Positive feedback from superiors</td>
<td></td>
<td>82.1%</td>
<td>15.5%</td>
</tr>
<tr>
<td>Difficulty for people to accept opinion</td>
<td>41.3%</td>
<td>58.8%</td>
<td></td>
</tr>
<tr>
<td>Have you ever supervised from 8 pm to 8 am</td>
<td>24.4%</td>
<td>41.5%</td>
<td>34.1%</td>
</tr>
<tr>
<td>Carried out long standing supervision</td>
<td>31.3%</td>
<td>68.8%</td>
<td></td>
</tr>
<tr>
<td>Opportunity to handle high profile project</td>
<td>55.4%</td>
<td>20.5%</td>
<td>24.1%</td>
</tr>
<tr>
<td>Confidence to make decisions or instructions</td>
<td>90.5%</td>
<td>9.5%</td>
<td></td>
</tr>
</tbody>
</table>
Survey results on Female scientists are limited in how much they can succeed in science compared to male scientists.

Source: APNN-INWES Survey
## SOUTHEAST ASIAN GENDER INEQUALITY IN WORK AND SOCIETY

<table>
<thead>
<tr>
<th>Country</th>
<th>Female population 2016 (million)</th>
<th>Gender equality in work</th>
<th>Essential service and enablers of economic opportunity</th>
<th>Legal protection and political voice</th>
<th>Physical security and autonomy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>125.6</td>
<td>0.52</td>
<td>0.88</td>
<td>0.37</td>
<td>0.82</td>
</tr>
<tr>
<td>Philippines</td>
<td>50.0</td>
<td>0.73</td>
<td>0.91</td>
<td>0.51</td>
<td>0.90</td>
</tr>
<tr>
<td>Vietnam</td>
<td>46.8</td>
<td>0.55</td>
<td>0.95</td>
<td>0.32</td>
<td>0.80</td>
</tr>
<tr>
<td>Thailand</td>
<td>34.3</td>
<td>0.66</td>
<td>0.92</td>
<td>0.18</td>
<td>0.74</td>
</tr>
<tr>
<td>Myanmar</td>
<td>27.6</td>
<td>0.57</td>
<td>0.80</td>
<td>0.22</td>
<td>0.77</td>
</tr>
<tr>
<td>Malaysia</td>
<td>15.5</td>
<td>0.51</td>
<td>0.88</td>
<td>0.19</td>
<td>0.89</td>
</tr>
<tr>
<td>Cambodia</td>
<td>7.9</td>
<td>0.52</td>
<td>0.86</td>
<td>0.32</td>
<td>0.86</td>
</tr>
<tr>
<td>Singapore</td>
<td>2.8</td>
<td>0.68</td>
<td>0.94</td>
<td>0.36</td>
<td>0.96</td>
</tr>
</tbody>
</table>

Source: The cost of gender inequality | The ASEAN Post
9 September 2018