Conference ”Women in STEM” - with WISE committee of AASSA

Report of Contributions

Contribution ID: **4** Type: **not specified**

Welcome messeage

Monday 4 August 2025 13:30 (5 minutes)

Presenter: YOKOYAMA, Jun-ichi (Kavli IPMU, Tokyo)

Contribution ID: **5** Type: **not specified**

Opening message

Monday 4 August 2025 13:35 (5 minutes)

Presenter: HIBIYA, Junko (Science Council of Japan)

Contribution ID: **6** Type: **not specified**

Supporting and increasing the visibility of women in science

Monday 4 August 2025 13:40 (30 minutes)

Attracting women and girls to science, technology, engineering and mathematics (STEM) and providing an environment for them to thrive and progress is a shared responsibility of government, academia, the education system, industry, and the community. I will discuss the Women in STEM Decadal Plan1, developed by the Australian Academy of Science (AAS) in collaboration with the Australian Academy of Technology & Engineering. This ten-year plan offers a vision and opportunities to guide stakeholders as they identify and implement specific actions needed to build the strongest STEM workforce to support Australia. The AAS also hosts the STEM Women website, an online directory which aims to promote gender equity in STEM by showcasing the breadth of scientific talent to enable a diverse range of women to be offered opportunities to progress their careers and personal capabilities. In partnership with the Association of Academies & Societies of Sciences in Asia (AASSA) and the InterAcademy Partnership (IAP) in September 2021 this was extended to STEM Women Asia to help discover the diversity of women with STEM skills across Asia and Oceania. Then in November 2022, STEM Women Global was launched to increase the visibility of women working in STEM worldwide. Further, the AAS convenes the International Science Council (ISC) Regional Focal Point for Asia & the Pacific (RFP-AP), which acts as a hub for ISC members and activities in the region. The ISC RFP-AP aims to ensure that the unique needs and priorities of the Asia and Pacific regions are integrated into the global scientific dialogue. A mentoring programme commenced in September 2024 to connect early career researchers (ECRs) with senior science mentors to guide young scientists from low-income nations within the region to become future leaders in academia. A case study of an ECR in chemistry who participated in the program will be presented.

Presenter: SEPAROVIC, Frances (WISE (Australia))

Contribution ID: **7** Type: **not specified**

Women in STEM and Small-Scale Chemistry: Empowering Change through Innovation and Inclusion

Monday 4 August 2025 14:20 (30 minutes)

This presentation examines the intersection of gender equity and scientific innovation through the lens of Small-Scale Chemistry (SSC), an educational approach designed to make chemistry more accessible, cost-effective, and environmentally responsible. In many parts of the world—particularly in South and Southeast Asia—systemic barriers continue to limit the participation of women in science, technology, engineering, and mathematics (STEM). SSC offers a transformative strategy to overcome these barriers by enabling women to engage with science as both educators and learners, even in resource-constrained environments. Drawing on regional data, successful case studies, and the speaker's extensive experience in teacher training and curriculum innovation, this session highlights how SSC can serve as a powerful tool for inclusion and empowerment. The presentation will also outline practical strategies for integrating SSC into national education systems and establishing supportive networks that foster the advancement of women in STEM. Ultimately, this talk advocates for an inclusive, hands-on approach to science education that inspires and equips the next generation of female scientists and leaders.

Presenter: TANTAYANON, Supawan (WISE (Thailand))

Contribution ID: **8** Type: **not specified**

Advancing Human Resource Development for Women in Science and Engineering in the Philippines

Monday 4 August 2025 15:40 (30 minutes)

Although the Philippines ranks highly in gender parity overall, significant gaps persist in STEM—especially in engineering, manufacturing, construction, and leadership roles.Women hold ~45% of bachelor's degrees in science & technology, but only ~25% in engineering/manufacturing/construction. Barriers include female stereotype reinforcement, gendered career opportunities, workplace bias and discrimination and limited role models. Strategic recommendations to advance Women in STEM include funding for mentorships and scholarships; improve STEM teaching practices; Support gender-responsive HR; and Ensure flexible & safe workplaces.

Presenter: CASTILLO MATIAS, Aura (WISE (Philipinnes))

Contribution ID: **9** Type: **not specified**

Breaking Waves: Empowering Women in Marine Science in Thailand

Monday 4 August 2025 16:20 (30 minutes)

Women in marine science in Thailand have made remarkable strides despite facing systemic challenges in access, representation, and recognition. This talk explores the evolving landscape for women in the field—from early barriers to emerging leadership roles in research, education, and conservation. Drawing on personal experience and national initiatives, the presentation highlights how empowering women has led to more inclusive, innovative, and impactful marine science. By investing in mentorship, capacity building, and policy change, Thailand is creating waves of transformation and ensuring that the next generation of marine scientists reflects the diversity and strength of the communities they serve.

Presenter: CHAVANICH, Suchana (WISE (Thailand))

Contribution ID: **10** Type: **not specified**

Strategies for Utilizing Highly Experienced Korean Women Scientists and Engineers in an Era of Population Decline

Tuesday 5 August 2025 10:00 (30 minutes)

South Korea faces a serious challenge due to its rapidly declining birthrate—recording the lowest among OECD countries. This decline in birthrate is leading to a shrinking workforce, adversely affecting the supply of science and technology talent. In response, the Korean Academy of Science and Technology's Committee for Women Scientists has initiated the issue report to explore how experienced women in science and technology can be better utilized to maintain and enhance the workforce during this era of demographic change. This report examined the status and trajectory of highly experienced women in ST; to identify the aspirations of these professionals post-retirement and to propose policy directions to facilitate their continued contributions. The findings of the report will be shared in this talk.

Presenter: SOHN, So Young (WISE (South Korea))

Contribution ID: **11** Type: **not specified**

Gender gap in research and development in Sri Lanka

Tuesday 5 August 2025 10:50 (30 minutes)

The Gender Gap in Research and Development in Sri Lanka Nadira D. Karunaweera1,2, Rajika Dewasurendra2, Vidyani Kulatunga2 1 National Academy of Sciences of Sri Lanka, 2Department of Parasitology, Faculty of Medicine, University of Colombo, Sri Lanka Research and Development (R&D) sector plays a key role in Sri Lanka by improving the nation's science and technology competencies, but the gender gap in the field remains a concern. This study reveals the persistence of the gender gap in Sri Lanka's R&D workforce, providing a comprehensive analysis of gender distribution across disciplines, age groups, educational qualifications, employment sectors, and academic positions together with temporal trends. The analysis is based on published national data from Science & Technology and R&D surveys, including head counts and Full-Time Equivalent (FTE) values. Gender proportions were calculated across multiple categories: discipline, age, education, employment sector, academic positions, National Academy of Sciences fellows, and research students. Findings indicate a gradual narrowing of the gender gap in Sri Lanka's R&D workforce over the years 1984 to 2022, with female representation rising from 23.9% in 1984 to 45.4% in 2022. Natural, agricultural, medical and social sciences show more balanced gender participation, while engineering remaining male-dominated. Both men and women are most represented in the 31-40 and 41-50 age groups in R&D and there is a consistent gender gap in all categories. The number of male researchers in all age categories has exceeded that of females from 2016 to 2022. There is a substantial increase in the educational advancement of both genders in R&D in Sri Lanka from 2004 to 2022. However, the number of male PhD holders outnumbers the female with same qualifications indicating a persistent gender gap in the highest academic qualification. Female representation in higher education teaching in Sri Lanka has steadily increased from 2010 to 2023. Nevertheless, a notable gender gap persists in senior academic ranks with positions such as professor and senior lecturer still predominantly held by males. State sector employment demonstrates a more balanced gender composition compared to the private sector. The number of female research students and Fellows of the National Academy Sciences of Sri Lanka are also on the rise. Overall data demonstrates that Sri Lanka's R&D sector has made significant progress in reducing the gender gap over the past several decades. This study underscores the need for targeted policies to bridge gender gaps further, focusing more on selected fields of concern and promote inclusive innovation in Sri Lanka's R&D sector achieving gender equality by maximizing talent and driving sustainable national development.

Presenter: KARUNAWEERA, Nadira (WISE (Sri Lanka))

Contribution ID: **12** Type: **not specified**

Turkish Women in Science and Technology: Current Status and Empowering Strategies

Tuesday 5 August 2025 11:30 (30 minutes)

Presenter: ERDEM GÜRSAN, Kadriye Arzum (WISE (Turkey))

Contribution ID: **13** Type: **not specified**

Barriers to Breakthroughs: Women in Nepal's Information and Communication Technology's Landscape

Tuesday 5 August 2025 13:40 (30 minutes)

Research The Information and Communication Technology (ICT) sector is recognized as a key driver of economic growth and innovation, both globally and within Nepal. However, despite women comprising over half of Nepal's population and achieving higher university enrollment rates than men, their active participation in the ICT workforce is strikingly low in Nepal, hindering the sector's potential for inclusive and equitable growth. Thus it was essential to provide an evidence-based analysis of the existing landscape, identify specific barriers, and uncover opportunities to empower women in this crucial economic domain. Women in Information Technology (WIIT) in Nepal undertook this task by conducting a survey and research "Barriers to Breakthroughs: Women in Nepal's Information and Communication Technology Landscape" with support from The Asia Foundation (TAF). The study, based on extensive surveys of ICT companies, ICT-enabled companies, professional women and focus group discussions with professionals & stakeholders reveals stark disparities: women constitute only 7.88% of the workforce in Nepalese ICT companies and a mere 0.51% in ICT-enabled firms, with even lower representation in leadership roles. Key challenges identified include significant work-life balance issues, subconscious bias in hiring and promotions, limited access to mentorship & role models, financial constraints for advanced education. Encouragingly, 87.9% of surveyed women reported no pay disparity. In exploring competitive edge women bring to ICT roles, women are highly valued for their ethical professionalism (98.3%), customer relations & communication skills (95.7%) and innovative & problem solving nature (87.1%). Actionable recommendations include hands-on training and networking for young women, mentorship and inclusive policies for organizations, and government-funded scholarships, tax incentives and equitable laws, thus providing Nepal with a foundational data-driven resource for policy makers and industry leaders to design and implement targeted interventions. For the broader Asia Pacific region, this research offers a localized case study that resonates with shared challenges in women's STEM participation. It can also serve as a catalyst for regional dialogue and collaborative efforts to build inclusive digital future.

Presenter: PRADHAN MANANDHAR, Gunakeshari (WISE (Nepal))

Contribution ID: **14** Type: **not specified**

TBA

Tuesday 5 August 2025 14:20 (30 minutes)

Presenter: ATEEQ, Bushra (WISE (India))

Contribution ID: **15** Type: **not specified**

Women in Science in Russia

Tuesday 5 August 2025 15:40 (30 minutes)

It is commonly believed that women in Russia are underrepresented in science and industrial production. Their primary occupations are focused on household responsibilities, child-rearing, or careers in humanities and creative fields. However, recent research shows that this situation has changed: women now comprise approximately 30% to 40% of researchers in the engineering and natural sciences. At the same time, women encounter significantly more obstacles and stereotypes on their scientific career paths. These challenges include the "double burden", the gender pay gap, segregation by fields of study and employment sectors. Despite these difficulties, the contribution of Russian women to science, as well as their overall involvement, is very substantial. Data on publication activity and citation impact, measured using metrics such as the H-index, show that the average publication output of women is higher than that of men. Moreover, the proportion of women holding leadership positions is increasing. These roles include laboratory heads, department managers, and directors of research institutes. The report is dedicated to the work of Russian women in science.

Presenter: VARLAMOVA, Natalia (WISE (Russia))

Contribution ID: **16** Type: **not specified**

Challenges of building research career in biomedical sciences and way forward: women perspective of a low- and middle-income country in South Asia

Tuesday 5 August 2025 16:20 (30 minutes)

Presenter: NAHEED, Aliya (WISE (Bangladesh))

Contribution ID: **17** Type: **not specified**

Six years of Women in Science Japan: Lessons on community-building, mentorship, and professional development

Wednesday 6 August 2025 10:00 (30 minutes)

Presenter: ODA, Elizabeth (Women in Science Japan)

Contribution ID: **18** Type: **not specified**

TBA

Wednesday 6 August 2025 10:50 (30 minutes)

Presenter: MASU, Kazuya (The National Institute of Advanced Industrial Science and Technology)

Contribution ID: **19** Type: **not specified**

Women in Math

Wednesday 6 August 2025 11:30 (30 minutes)

Discuss the situation in Math. as well as some of the initiatives in STEM in Japan

Presenter: KOTANI, Motoko (Tohoku University)

Contribution ID: **20** Type: **not specified**

Movie ”Marguerite’s Theorem

Wednesday 6 August 2025 13:00 (2 hours)