

Editorial*

Arti Kashyap and Varsha Singh, Guest Editors

As women scientists working together on the 2020 ‘Women’s Edition’ of *Resonance*, we approached this editorial with a lot of mixed feelings. While on the one hand, we are cognizant of the discourses the tradition of this women’s edition sprung from back in 2017 – empowering instances such as the Air India flight with the “all-female crew” that flew around the world just ahead of Women’s Day – on the other hand, we cannot discount the gender imbalance that compels the *Resonance* editorial board to create an edition specifically catered towards featuring work authored by women in the first place. And so, while we celebrate the achievements of women in fields like physics, mathematics, chemistry, and biological Sciences, we also face the challenge of constantly needing to assert and prove the capabilities of women within academic spheres. In an ideal world, there would be no reason or need for a special issue to demonstrate the capabilities of any gendered community. However, idealism is a far-fetched concept in our present-day reality; therefore, we feel the necessity to collate and provide a platform to display the remarkable work done by our women scientists across various fields.

In the Indian context, we have striven towards a balanced society by introducing a foray of schemes, projects, and initiatives directed towards the empowerment of women. However, one is left to wonder whether these administrative launches have a tangible impact on our mindset. Do privileges and special schemes actually lead to the empowerment they strive towards? The question brings to mind the following initiatives, announced by the Government of India at ‘Women in Science’ themed National Science Day celebrations:

Vigyan Jyoti: An initiative that will create a level-playing field



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for the meritorious girls in High School to pursue Science, Technology, Engineering, and Mathematics in their higher education.

GATI: The Gender Advancement for Transforming Institutions (GATI) will develop a comprehensive charter and a framework for assessing the gender equality in Science, Technology, Engineering and Mathematics.

E-resources: An online S&T resource portal for women, enlisting all the women-specific government schemes, scholarships, fellowships, and career counselling with details of subject area experts from various scientific disciplines.

The aforementioned initiatives are commendable, for they aim at the redressal of gender divisions from the early schooling till career advancement. These initiatives, rather than providing temporary privileges, aim towards creating a level playfield for women in science.

This issue features Dr Wu, one of the renowned physicists in the last century who made fundamental contributions to our understanding of the nature of weak interactions and enabled the correct theory of such interactions to be written down. She was a Chinese-American physicist and acknowledged as the 'First Lady of Physics'. We have two articles in biology, one on mating behaviour and the other on signalling at the neuromuscular junction. Experienced authors have explained difficult topics with fine ease to reach to the young readers directly. New quantum phase of matter, non-linear chemical reactions, operads, wandering magnetic poles, etc., are some of the other topics covered in the issue. Face to Face with Fabiola Gianotti, Director-General, CERN, at Vigyan Samagam is the icing on the cake.

Through this special issue, we encourage budding scientists to find both representations, as well as information, about the established and emerging women scientists and the research they engage with in fields like natural sciences, engineering and mathematics. However, along with that we urge them to be cognizant of the fact that the onus of restructuring scientific spaces such that the inclusion of women is the norm, and not a 'special' oc-



currence, lies upon each one of them. The next generation of women scientists have the added responsibility of establishing that women in the sciences exercise the same authority as their male counterparts, and need not resort to the constant struggle of proving their capabilities. This edition, therefore, celebrates the many successful women scientists around us, and ardently hopes for a reality where women do not constantly feel compelled to prove their worth.

