

**A**fter finishing my bachelors in Industrial and System Engineering, in 2012 I came to Canada from Iran and started my doctoral studies in Industrial Engineering at Université Laval's Mechanical Engineering Department. My doctoral thesis project was on healthcare service delivery. As a young engineer, I was looking to extend my network, strengthen my technical skills and form my professional career. Through one of my friends, I became familiar with IEEE, and soon started my activities as a graduate student member. Becoming more familiar with the wide range of IEEE activities, I became interested in greater involvement. I have long been drawn to women's issues, which led me to learn about IEEE WIE activities. Throughout my life, I have looked for any opportunities to inspire girls to follow their dreams and to believe in their abilities. As women were in the minority in my engineering program and even in my faculty, I became interested in how gender affects interest and education in the STEM -related fields, and how we could engage more female students in



these fields. IEEE WIE has beautifully guided me along a path to achieve these goals.

Following my interests, in 2014 I founded IEEE WIE Québec affinity group to support other women in these fields, and as Chair launched a variety of initiatives. Through my activities as an IEEE and IEEE WIE member during subsequent years, I have been given the opportunity to meet inspiring leaders, successful engineers and scientists; to learn from them, and enrich my personal and professional skills as a young engineer. Having completed my doctoral program, I am now working in a research capacity that includes giving women more influence and power in determining their health decisions. I believe that women build the foundations that next generations depend on, and their empowerment directly benefits society. IEEE has given me the opportunity to serve my interest in inspiring and empowering women in my community and consequently serve society.

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## Working successfully in multi-disciplinary teams – an Industrial Engineer's perspective

IEEE members will increasingly find themselves working in multi-disciplinary teams. These teams will not only include members from other engineering disciplines, but will also include those with totally unrelated backgrounds, e.g., law, medicine and the social sciences.

The *IEEE Canadian Review* recently interviewed Dr. Rahimi about her research work in shared decision making in the Faculty of Medicine, Université Laval. She and her colleagues in the Department of Family Medicine and Emergency Medicine seek how to best enable patients and clinicians to collaborate to make healthcare decisions based on best evidence

and what matters most to patients, which will ultimately have profound impacts on health outcomes.

Dr. Rahimi is part of a team working on a large-scale implementation project on prenatal screening for chromosomal abnormalities such as Down Syndrome. Her specific research has to do with shared decision making in whether or not to have a test performed and if so, which test.

**ICR:** *How are shared understandings of problems arrived at?*

**SR:** If you mean shared understanding between my point of view as an engineer and a clinician's point of view, I could say it was quite challenging to me at the

beginning to adapt myself to very different fields' cultures to help reach a shared understanding. But with the passage of time, and by picking up some key points, it became much easier. In bridging differences, I can say empathy, flexibility, transparent communication, and having a sense of belonging are the most important. It requires empathy to understand what other team members' points of view are, e.g., those of clinicians. My philosophy is to place myself into their position and appreciate their views and potential concerns. Flexibility is needed to not only bring to the problem or solution your own expertise, but to adapt to working with the other team members. Transparent and good communication is essential as well—achieving that requires good listening skills. Lastly, it is important to have the sense of belonging to the team that you are working with... you shouldn't see yourself as a separate part even though

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your field and background are totally different than other team members. The main goal is shared amongst all, which is success of the team and the project.

***ICR: In reaching a consensus, how do multidisciplinary teams avoid creating the perception of invalidation when a member's opinion is not reflected in the final decision?***

**SR:** Based on my experience, I think creating a friendly environment in which all have opportunity to talk and express their thoughts, knowing that they won't be judged could play an important role. First, this could help them to express themselves, bring innovative ideas to the discussions, and if their opinion is not reflected in the final decision at least they had an opportunity to speak up. Second, creating a friendly environment could help team members accept that rejection of an idea by the group isn't a rejection of the person(s) that put forward the idea.

***ICR: To what extent do different professions have different approaches to problem solving?***

**SR:** Comparing engineers and clinicians' approaches, I can say they have very different approaches. For example, while engineers are more focused on technical and methodological sides, clinicians' first priority is human aspects.

However, I can say that they all have the same goal — which is solving the problem in the best possible way. They reach that with different perspectives, and that's why flexibility is important in multidisciplinary teams.

***ICR: How much understanding of different disciplines does the team leader need?***

**SR:** I think that leaders need to engage in an ongoing process and improve their understanding of different disciplines: in addition to seeing the big-picture, they need to also be able to grasp details and understand them. In general, having a big-picture knowledge is required, and in some aspects, detailed understanding is important and influential in guiding the team well. So balanced knowledge and understanding of different disciplines is important for leaders in multidisciplinary teams.

***ICR: How can a leader guard against bias in favour of her/his own background/discipline?***

**SR:** I think having an open mind and being eager to learn could help; learning different disciplines could give leaders multiple perspectives and ways of looking at the same problem. Also, having multi-disciplinary team meetings periodically, and at key decision points, would be a way to give equal voice to all disciplines, and guard against biased thinking and decision making. ■