

2020 George T. Hanyo Awardee: Marilyne Sousa - “For establishing the first online utilization of a TEM platform infrastructure across the Atlantic, thereby enabling a first-of-its kind online sharing of large research infrastructure”

AVS has honored the remarkable contributions of Marilyne Sousa, IBM Research Zurich, with the 2020 George T. Hanyo Technical Award. This Award recognizes the valuable contributions made by persons outside normal professional circles. Eligible candidates include those working in equipment design and construction, data analysis, improvements in experimental procedures and other comparable activities. An awardee must have contributed unusual skills and creative scientific or technical ideas in support of at least one major research or development program which influenced areas of interest to AVS, and this supporting work must have been provided over a period of at least ten years. The Kurt J. Lesker Company established this award in 1969, in the memory of George T. Hanyo, a highly skilled, long-time employee of the company. Marilyne has joined a list of extraordinary awardees, and today we have the opportunity to get to know Marilyne a little better, as she has graciously granted AVS an interview.



Professional Life

Marilyne has worked at IBM Research Europe, in the Zurich laboratory, as a Hardware Engineer since 2000. She takes care of various material characterization instruments and coordinates experiments. She begins her day reading emails, checking the status of the tools she oversees, and preparing either to meet or to set up the experiment that will follow. Marilyne finds these meetings important because they offer opportunities to collaborate and share information about experiments with a larger circle of colleagues. For the remainder of her typical day, she will perform or advise on experiments. Marilyne commented upon how COVID-19 affected her daily life though. “Of course, my routine was turned upside down, but we quickly found new ways to work and keep making progress on the projects.” Marilyne and her team pivoted quickly, and this is likely due in part, to how people would describe Marilyne in one word – committed.

Marilyne feels committed to the success of her IBM colleagues, and finds interacting with them to be her favorite aspect of her work. Since she performs materials characterization for various projects within IBM Europe, she enjoys the opportunity to interact with many talented people. She learns from them, and they challenge her to perform at her best. Before she can perform her role, she must collaborate with her colleagues to understand their projects and their needs. She enjoys this very much because it affords her the opportunity to get to know her colleagues better, many of whom come from diverse cultural backgrounds. She enjoys the exposure to their cultures and their languages (she speaks four languages) – just like traveling, but with all the comforts of home. Marilyne’s colleagues appreciate her greatly because they know her as someone who listens to them and helps them get the best out of their projects. She also respects and admires their work and intelligence, and finds their projects innovative and relevant to society. These aspects contrast with her least favorite part of her job “when several tools are out of order simultaneously. Fortunately, this happens rarely (...but it happens).”

We also asked Marilyne if anyone in particular has helped her rise to meet her professional goals. She explained that “most people I have met over the years encouraged me, either with a few words or acts.

Here, I cannot resist mentioning my actual manager, Kirsten E. Moselund, who not only trusts and supports me, but also nominated me for this Award. I thank her very much." As a side note, Marilyne also thanked the people who supported her application, the American Vacuum Society (AVS) and the Kurt J. Lesker Company. Marilyne also mentioned her grandmother, who she says "was a constant inspiration. She was a cook who walked all around Portugal to work and learn new recipes. I was really impressed by her passion for her job, her capacity to listen and adapt, as well as her humility." That sounds a lot like Marilyne too.

Marilyne continues to strive for excellence, and has big goals for the future. For her next big goal, she plans on opening microscopy analysis to a "broader audience. Many researchers could potentially take advantage of microscopy analyses. It would be very useful to allow casual users to perform routine analyses themselves, e.g., with the help of machine learning." Another big goal she has is "to become a terrific Ph.D. supervisor," an admirable goal. Marilyne seems well positioned to attain these goals because if she could leave one piece of advice for our future generations, it would be to "follow your dreams." Marilyne seems to be doing exactly that, and very successfully.

Relationship with AVS

Marilyne's substantial volume of contributed data made it to AVS well before she did, but she greatly looks forward to becoming more involved with the Society. She has not directly participated in AVS much yet, but during the last two decades, she has given her AVS-affiliated colleagues permission to present a lot of her acquired ellipsometry, x-ray and TEM data as part of their research findings. She "always thought that the AVS would not be interested in my little piece of work . . . which I now see is a mistake, but it is never too late, right?" She feels eager to deepen her involvement with AVS now because she feels that a strong match exists between the AVS mission and her skills and interests. She even has plans to develop collaborative research projects. Moreover, she explained that IBM has long been a strong supporter of AVS. AVS "comprehends our need at IBM to gain more expertise and meet the right experts in fields closely or broadly related to our activity. This is even more crucial now, when AI and machine learning are enhancing the pace of discoveries and innovation." She thinks that AVS offers the "perfect platform to ignite new projects and generate new ideas or collaborations among affiliates." We certainly look forward to seeing Marilyne's continued and valuable contributions to AVS.

Behind the Scenes

Outside of her many professional pursuits, Marilyne has a full personal life as well. She has an "endlessly supportive" husband and two sons (ages 8 and 10), whom she loves to watch grow. Since the birth of her sons, she has worked part-time and takes a very active role in their lives - dropping them off at school, cooking for them, and helping them with their homework. When she has spare time, she greatly enjoys reading, "especially biographies of people who have made a difference, if not history." She also loves hiking because "it is simply fantastic to live in Switzerland where there are so many amazing landscapes." Besides hiking, she regularly stays active by participating in Pilates classes.

Marilyne provides a wonderful example of what she admired greatly in her grandmother: her passion for her job, her capacity to listen and adapt, as well as her humility. A strong role model in her field, Marilyne has made many valuable, long-term contributions to the scientific community. Please join us in congratulating her on earning this well-deserved award!