

**Sara Pena Barros**

**Candidate for IEEE Region 8 Vice-Chair Member Activities**



**BIOGRAPHY** [100-150 words]

Sara Pena Barros, born and raised in Portugal, living in The Netherlands. Received her MSc in Electronics Engineering and Telecommunications in 2013, having spent her first 3 undergraduate years at the University of Aveiro, Portugal, and her last two years at Technische Universiteit Eindhoven, The Netherlands. Her studies culminated with a full-year research project “OFDM for Data Distribution in Phased Array Antennas” in collaboration with Thales Nederland B.V., for which a patent application was filed. After graduating, she continued with the company and joined their ‘Surface Radar – Strategy, Technology and Innovations’ group in Delft as an Advanced Development Engineer. There, she is involved in low TRL research activities related to the development of advanced waveform concepts and novel radar technology; she also participates in Integrated Topside Design studies for several Navies around the world, more specifically, responsible for the Radiation Hazards and above deck interference analysis.

**IEEE ACTIVITIES**

COMMITTEES/BOARDS: (IEEE Major Boards and Committees)

Microwave, Theory and Techniques Society (MTT-S) Young Professionals Chair, 2020  
Microwave, Theory and Techniques Society (MTT-S) Young Professionals Vice-Chair, 2019  
MGA Young Professionals Committee Member 2017-2018, 2020  
TAB AdHoc Committee on Design for Ethics, Young Professionals Representative, 2017

REGIONS: (Region 8 and others)

Region 8 Strategic Planning Committee Member, 2019-2020  
Region 8 Young Professionals Committee Past-Chair, 2019-2020  
Region 8 Young Professionals Committee Chair, 2017-2018  
Region 8 Young Professionals Committee Member, 2015-2016

SECTIONS/CHAPTERS:

Benelux Section, Young Professionals Affinity Group Vice-Chair, 2015-2016

STUDENT BRANCHES:

Portugal Section, Universidade de Aveiro Student Branch Chair, 2011-2012  
Portugal Section, Universidade de Aveiro Student Branch Secretary, 2009-2010

CONFERENCES:

Responsible for the European Microwave Week IEEE YP track 2017,2018,2019,2020

OTHER: (Society Memberships)

Microwave, Theory and Techniques Society

**QUALIFICATIONS** [100-120 words]

I’ve been a member and active volunteer for almost 10 years now. Since day 1 that I have been involved with the local Organisational Units up to a Regional and Global level in the last 4 years. My

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main focus has been on Students and Young Professionals, which has given me the chance to learn in first-hand what is needed to achieve member satisfaction in this large segment of our membership, but also given me the opportunity to tackle one of our biggest challenges, which is membership retention and vitality of the existing OUs. As a member, am a Young Professional woman in Industry, thus providing a unique perspective while touching the domain of most of the current SubCommittees under Member Activities.

## **MAJOR ACCOMPLISHMENTS** [100-120 words]

- As Secretary and Chair of the Universidade of Aveiro Student Branch (2009-2012), I and the team have revitalised a dying OU, re-launched the oldest IEEE robot competition in the Region and introduced cross-organisational collaboration with the fellow student associations to multiply our impact.
- As Vice-Chair of the Benelux Young Professionals Affinity Group (2015-2016), I and the team have identified the major challenges of keeping such a group in a 3-country Section with abundance of financial support and opportunities from several entities external to IEEE and worked on composing a diverse and versatile team with a foot on each border and technical domain. This has increased the visibility of IEEE in the Technical Universities and interest in its networking and career advancing potential.
- While a member of the R8 Young Professionals, the team has achieved a notable improvement on the vitality of our OUs by working on a personal guidance/training method of the volunteers on the ground. In parallel, we have extended the net of Cross-Sectionals and spun-off programs as the Event Exchange Program (which is now global) and the YP Newsletter, which is ran up to its 5th edition, up until when we decided to bet on a more dynamic digital framework. Retention rate has increased and the visibility of the Young Professionals program is widely spread across the Region.
- As a Chair of the R8 Young Professionals, I've led the team to develop a sustainable framework for the (Cross-Sectional) Student and Young Professionals Congress by drafting and getting approving of a new funding and selection criteria, as well as a set of rules/requirements for hosting such a Congress. The personal guidance/training method, introduced in the previous years, contributed to a complete set of vital YP AGs and enabled the formation of 5 new ones. Parallel to the coordination of our volunteers, we have developed and implemented two brand projects aimed at industry members (IEEE, Connecting Experts) and entrepreneurs (R8 Entrepreneurship Initiative), which have outgrown out of their pilot phase into Regional signatures (2020) under consideration to become global.
- As Past-Chair of the R8 Young Professionals, after the transition, I've taken a step back and let the team shine, mentoring and advising only when necessary. They have done a fantastic job outgrowing the two brand projects (IEEE Connecting Experts and R8 Entrepreneurship Initiative) from pilot phase to the public, winning an IEEE Foundation Grant in the process, which they will use to expand. They have also (and partially through these programs) increased cooperation with Societies and with the remaining teams under R8 MA, especially WiE and PEA.
- As member of the R8 Strategic Planning Committee, I've had the opportunity to widen my view and understanding of how IEEE works and the politics involved. Although final decisions have been postponed due to COVID, we covered two major topics: splitting of the Region and membership dues; the first one has been thoroughly discussed and a proposal has been drafted.
- As (Vice-)Chair of the MTT-S Young Professionals, we worked (and still work) on increasing our footprint at flagship conferences. Once everyone knew what Young Professionals are and the importance of addressing this audience during a conference, we have stepped up to analysing our financial and organisational efforts: what percentage of the target audience attends the event? How many new members are we getting as a result? Are we able to reach people that are not IEEE or MTT-

S members? Is the retention and increased membership in balance with the expenses to host such events? Additionally, we have been focusing on increasing the interaction with Regional YP Chairs and local YP AG Chairs, in order to divide and conquer. The COVID crisis has been particular challenging, since a lot of these conferences are now being cancelled, delayed or held online.

**POSITION STATEMENT [100-120 words]**

Region 8 is very close to my heart. I have been a volunteer from day 1 (2009) and, no longer a student and 7 years into industry, continue to spare most to all of my free time to IEEE. Although often offered to take on different volunteering positions throughout the years, I like to stay dedicated to a single one at a time (as you can see in the IEEE Activities section). This allows me to put in 100% of my efforts and creativity on the job at hand. That's what I intend to do if elected to be Vice-Chair for Member Activities. I've grown in the cultural challenges our Region offers and face personally most of the causes driving our members to leave; for this reason, I believe I have the needed volunteering and personal experience, as well as the necessary energy and fresh ideas to boost our membership retention and members' satisfaction with the help of the several subcommittees.