CI applications areas, which allow the organization of hybrid sessions, outlining research topics of a variety of computational intelligence techniques. The next IEEE WCCI meetings will be held in Glasgow, Scotland, and Padova, Italy in 2020 and 2022, respectively. The IEEE Symposium Series on Computational Intelligence (IEEE SSCI) is another important CIS conference, held every year around December. IEEE SSCI is organized as an association of more than twenty symposia. IEEE SSCI 2020 will be organized in Canberra, Australia, and IEEE SSCI 2021 will be in Orlando, Florida, USA.

Conference Finance and Conference Bids Sub-Committees are responsible to evaluate the proposed budgets and bids received from potential organizers. Careful preparation of a bid and its associated budget is a very important step to a successful approval and realization of a conference. The Conference Committee provides all the support and advice to help General Chairs. Instructions for the preparation of proposals are available on the CIS website (https://cis.ieee.org/conferences/conference-proposals). We are preparing a new document to be uploaded on CIS website, to further facilitate the work of general chairs. This document will contain guidelines to prepare the budget Excel file, explaining in details the CIS rules regarding conference budgets and the important entries that need to be included to achieve a successful

event. We are also preparing a guide to better help conference chairs in all steps of the organization.

Technical Co-Sponsorship Sub-Committee deals with the evaluation of proposals of various other conferences that are handled by local organizations with a technically co-sponsorship from CIS, expanding the participation of CIS to other related topics and countries.

Strategic Planning Sub-committee is where new ideas are proposed and discussed. One of the new strategies being discussed in this Sub-Committee is the organization of an Industry Focused Conference ("CI Expo") with industry applications of CI/AI/machine learning. CIS conferences should be promoted and associated with the new wave of Artificial Intelligence. These actions can contribute to CIS's overall growth in terms of membership and volunteers' participation, as well as attracting young entrepreneurs to join our society. We will continue to support this important initiative, providing all the necessary support to consolidate the Industry Focused Conference, in order to increase the participation of companies' personnel; improve sponsorship from industries; attract young entrepreneurs – startups to find capital investment; and increase the participation of students – find employment opportunities.

There are some other important issues that need to be considered and discussed. It is important to define efficient strategies to attract younger talents

to get involved in conference activities. It is essential to propose and promote actions to train and get younger professionals to serve in conference organization roles so that they can lead our flagship conferences in the future.

Another key issue is to continue our aim to increase the participation of women in the IEEE CIS Conference leadership. We are definitely committed to keeping looking for new strategies to obtain a more gender balance in the leadership of CIS conferences, as well as in their organizing committees. We encourage and promote women to contribute in all capacities, giving them the same visibility as men.

As already mentioned by previous VP Conferences, the most important component of our conferences is their scientific quality. Therefore, it is crucial that we continue to keep the highest attention to a very strict reviewing process, performed by Program and Conference chairs with the help of Technical Co-Chairs, on the basis of expert review reports. We will continue to improve the online submission and reviewing systems, providing authors, reviewers and Program Chairs a suitable and user-friendly environment to guarantee a high scientific program for CIS conferences.

I would like to stress that I am available and open to receiving suggestions, comments and new ideas to improve CIS conferences. All are more than welcome to contact me directly at marley@ele.puc-rio.br.

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IEEE CIS VP-Technical Activities Vision Statement

It is my great pleasure and honor to serve as Vice President for Technical Activities of the IEEE Computa-

tional Intelligence Society (IEEE CIS) for the period 2020-21. And I am extremely fortunate in doing so after my predecessor, Hussein Abbass, who did an excellent job in starting quite important initiatives as the successful IEEE CIS

Technical Challenge as well as redefining some operational aspects of the Technical Activities Committee.

I have been an IEEE member for a long time, since I was an engineering student interested in Artificial Intelligence

more than thirty years ago. During this period I have been involved in activities of different IEEE societies: Computer, Robotics and Automation, and Systems, Man, and Cybernetics. In what concerns Computational Intelligence, I have served the Society in different positions including Strategic Planning, Education, Nominations and Awards Committees, as well as being an AdCom member. And obviously, I have also been involved in IEEE CIS Technical Activities as a member of several Technical Committees and Sub-Committees, and Chair of the Intelligent Systems Applications TC.

The Vice President for Technical Activities is, according to IEEE Computational Intelligence Society Bylaws, responsible for coordinating the technical activities of the Society, while the Technical Activities Committee (TAC) is responsible for overseeing these activities. When defining the Agenda for the next two years as Vice President for Technical Activities, and consequently as Chair of the TAC, it is quite important to put it into context. IEEE is the world's largest technical professional organization for the advancement of technology, having as its motto "Advancing Technology for Humanity." And we, the IEEE Computational Intelligence Society, should contribute to this common goal in what concerns our field of activity: "Computational Intelligence."

In my view, it is possible to define four types of activities that contribute to scientific/technology advancement and consequently to the subsequent effects of this advancement in Humanity. Those four components are Education, Research, Transfer and Dissemination. Any institution related to science and technology makes a different combination of these components to define its own profile. And we, the IEEE CIS, should also define our own cocktail. We have our Education Committee that provides the education component. We also have the Publications Committee and the Conferences Committee to provide dissemination activities. And we finally have the Technical Activities Committee to complete the drink by adding research and transfer. But considering these four components as independent represents a significant mistake. They have strong interactions. As a result, the better we integrate the four aspects, the stronger our Society will become and the larger will be its impact on "Advancing Technology for Humanity." In that sense, technical activities should contribute to research and transfer, but without missing the education and dissemination components, being in a sort of crossroad of our Society, showing strong interactions with Conferences, Publications and Education activities.

Before considering some specific initiatives for the next two years, it is important to notice that the TAC and the technical activities of the Computational Intelligence Society are mostly organized around Technical Committees (TCs) and Task Forces (TFs). At present, the TAC has 12 TCs usually grouped in three main categories:

1) Technology-oriented TCs promoting CI technologies:
   ❏ Neural Networks
   ❏ Fuzzy Systems
   ❏ Evolutionary Computation
   ❏ Cognitive and Developmental Systems
   ❏ Adaptive Dynamic Programming and Reinforcement Learning
2) Application-oriented TCs dealing with applications of CI technologies:
   ❏ Bioinformatics and Bioengineering
   ❏ Computational Finance and Economics
   ❏ Data Mining
   ❏ Games
   ❏ Smart World
3) Incubator TCs trying to identify and nurture new CI technologies and new areas for CI applications:
   ❏ Emergent Technologies
   ❏ Intelligent Systems Applications

The TAC also includes the Standards Committee, dealing with standards, data sets, and software of interest to people working in CI, and the Strategic Planning Sub-Committee which hosts the task force on Ethical and Social Implications of Computational Intelligence. The overall structure is completed by the TFs, that grouped under the different TCs, are focused on more specific areas of CI. For a complete view of the list and topics of the TCs and TFs, please visit https://cis.ieee.org/technical-committees.

And now, let us start talking about what to do in the next two years, considering first a recently and successfully launched initiative, the IEEE CIS Technical Challenge.

The idea of launching a Technical Challenge to give visibility to our Society was considered for the first time more than three years ago in December 2016. Since that date, the definition and implementation of the Challenge have required a lot of time and effort. Initial discussions took place along 2017 and early 2018 at the level of the Strategic Planning for Technical Activities Subcommittee of the TAC. As a member of that committee, I was involved in those conversations where quite different approaches were considered and analyzed. After one and a half years of work, a preliminary problem was chosen and the question was mature enough to enter in a second stage. Then a new committee was created, the Technical Challenge Committee responsible for running the challenge and ensuring the integrity of the overall evaluation process. But running the challenge was much more complex than expected and it was impossible to complete the process in 2018, consequently the first Challenge was delayed to 2019 giving the Committee more time to select a new problem, define the process, select the platform to implement it and so on. Finally, the process was completed in 2019 and the IEEE CIS Technical Challenge was launched in July and closed on October first with significant success and around 6,000 teams participating.

I know how complex has been and how much effort has required this first Challenge, but there is no time to rest, and we need to keep on working to design the IEEE CIS 2020 Technical Challenge, consolidating this activity, being this a central point in the Agenda for next year.

A second interesting initiative recently launched and that needs to be consolidated in 2020 is the Scientific Mentoring Program. After two tests at a

lower dimension during IJCNN 2018 in Rio de Janeiro (Brazil), and FUZZ-IEEE 2019 in New Orleans (US), we plan to organize for the first time a Mentoring Program at WCCI level during WCCI 2020 in Glasgow (Scotland). The two previous programs have demonstrated the potential of this activity, but a much larger implementation at a WCCI level requires the strong involvement of a large team of volunteers that have already started its work.

From highly visible actions as the Technical Challenge or the Mentoring Program, we will move now to another initiative with quite limited external visibility but a high impact in the internal activity: the implementation of the recently updated Technical Activities Operational Manual, and the auditing of TCs. An updated Operational Manual has been recently defined and is now in the process of approval. As soon as the approval process is completed, we should start working on its implementation that should take place in 2020. We plan also to complete an already started auditing process involving the different TCs and TFs of TAC.

It has been mentioned before that transfer (technology transfer) should also be considered as one of the components contributing to scientific/technology advancement. In that sense, it is clear that IEEE CIS needs to improve its interaction with Industry, and TAC seems to be the right place to work for this improvement considering not only transfer but also dissemination activities. It is also important to achieve a higher involvement of Industry in IEEE CIS activities. We need to define new tools, and exploit the existing ones, to approach/attract industry and to gain visibility. Every TC or TF can play a role in this respect, but obviously, application oriented TFs will have more to offer to Industry. Tools to be considered are the organization of Industrial Panels in our conferences or even in our Computa-tional Intelligence Magazine. Other actions such as Industry oriented special sessions and application oriented special issues would also be interesting. These actions will obviously require the inter-action with Conferences and Publications Committees.

Technology transfer has been always in the agenda of TAC. Some years ago, there was a Technology Transfer Committee integrated as a component of TAC, but the committee disappeared, and some of the questions under its consideration were assumed by the Industry Liaison Sub Committee under the Education Committee. Recently, the IEEE CIS Strategic Plan included as one of its points, to: *"Increase collaborations and soften boundaries between CIS and other IEEE societies, emergent communities and industry,"* and designed some specific actions to be deployed by TAC (jointly in some cases with other Committees of IEEE CIS) in order to achieve this strategic goal:

❏ *Promote CI concepts to all IEEE members*
❏ *Demonstrate that CI is central part to all computational learning systems*
❏ *Constitute an Industry Advisory Committee*

The third point is of particular interest here. An Industry Advisory Committee could represent an extremely powerful tool to strengthen IEEE CIS collaboration with Industry. It will help in designing a strategic plan for the industry engagements, which include industry sponsors, demos, panels, special sessions/issues, and even recruiting events. The design and implementation of this Committee will represent a quite important point in TAC Agenda for the next two years, a design that will require a previous thoughtful analysis involving not only TAC but also ExCom and Education Committee (at least through its Industry Liaison Sub Committee).

To this point, I have mentioned actions that will require potential cooperation with Education, Conferences and Publications Committees. These and any other action or technical activity will always rely on volunteering IEEE CIS members. Consequently, a key action for the success of any initiative is to enlarge the body of volunteers supporting our activities. To do so, one important point will be to extend the support of TAC to regional IEEE-CIS technical activities in order to catch new people (and particularly young people) to work for the Society. This promotion at a regional level will require the cooperation with Chapters Committee (under Members Committee).

In summary, for the next two years, we are designing a mixture of different activities and initiatives. These activities range from doing business as usual by contributing to conferences (with papers, special sessions, panels, tutorials, workshops, etc.), or to journals (with papers and special issues), to completely new initiatives as the creation of an Industry Advisory Committee. We will also work to consolidate recently launched initiatives such as the Technical Challenge and the Mentoring Program. All these ideas will be implemented considering a quite synergistic approach with other Committees (e.g., Education, Publications, Conferences and Members), and trying to integrate the largest and widest possible team of volunteers. We should favor the integration in this team of young professionals, people from industry, and women, continuing with the Gender Balance Strategy of IEEE CIS.

I can't end this message without saying thanks to all those who have contributed and who will contribute to the success of the technical activities of our Society. Please, consider yourself as a potential candidate to join the team. New volunteers will be more than welcome. I am also open to any suggestion or comment. If you want to be involved or has any idea or opinion you want to share with me, please directly contact me at luis.magdalena@upm.es.