

Bernadette Bouchon-Meunier CNRS - Sorbonne Université, **FRANCE**

CIS and Industry Hand in Hand



t has already been a year since I wrote you my first message and the IEEE Computational Intelligence Society (CIS) can be proud of many accomplishments over the past months, in spite of the pandemic and disastrous health situation around the world. I would like to express my deep appreciation to all officers, Adcom members, Technical and Standing Committee chairs, conference General Chairs, for their dedication to the Society

and their contribution to its activities in this difficult context.

To forget the sad health situation around the world, let us rejoice in what Artificial Intelligence, and therefore Computational Intelligence (CI) at its core, does for humanity. An Artificial Intelligence (AI) could support astronauts on a trip to Mars in recognizing his/her emotions and expressing an empathic response¹, based on an analysis of his/her speech and facial expressions. But there is no need to go to Mars to benefit from AI systems. For instance, AI has been generalized in healthcare^{2,3}: long-standing diagnostic support systems, assistance to surgery through minimally-invasive procedures or accurate vicarious surgical, management of medical data, administrative functions in the hospital or drug development are now developed everywhere. AI systems assist patients⁴ and elderly⁵ in accomplishing tasks and reducing isolation and mental distress. The present COVID-19 crisis has seen the emergence of many systems that can help detect or cure patients. The CIS publications highlight such achievements, in particular in the November issue of the IEEE Computational Intelligence Magazine⁶ presenting developments and insights for combating COVID-19 by means of Computational Intelligence methods. There are of course countless other applications of Computational Intelligence techniques in AI systems today and all sectors of smart world industries use

As I already told you, relations with industry are one of my priorities and those of the IEEE CIS officers. Accordingly, the IEEE CIS Adcom and the IEEE CIS Strategic Planning Committee of the IEEE Computational Intelligence Society decided to strengthen its ties with industry in establishing an Industrial Activities Ad Hoc Committee under the leadership of Piero Bonissone. This committee will identify the elements able to attract new IEEE members from industry to the CIS, to increase the number of senior and fellow CIS members from industry, to foster collaborations between companies and the IEEE CIS, as well as to increase the relationship between industry and IEEE

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 $^{^{1}}https://www.technologyreview.com/2020/01/14/64990/an-emotionally-intelligent-ai-could-support-astronauts$ -on-a-trip-to-mars/

²https://builtin.com/artificial-intelligence/artificial-intelligence-healthcare

https://jintensivecare.biomedcentral.com/articles/10.1186/s40560-020-00452-5

⁴http://hospitalinsightsasia.com/healthcare-40/healthcare-robotics-in-south-korea-sun-medical-center-ceo-dr-sun

⁵https://www.eldertech.missouri.edu/

 $^{^6} https://iee explore.ieee.org/xpl/mostRecentIssue.jsp?punumber = 10207$

CIS conferences. It will also contribute to showcase existing or future uses of CI in industrial realizations.

All of you who work in the industry are invited to get in touch with Piero Bonissone to highlight the excellence of their achievements based on CI and to express their interest in some particular CIS topic of expertise, in the emergence of a new CIS technical activity, in the creation of a webinar or a white paper,

in the active participation in one of the CIS conferences, for instance.

The challenges posed by AI systems such as their ability to provide explanations to the user about their functioning and the reasons of their decisions, as well as ethical issues and social implications, are currently being addressed by the CIS, engaging everybody working on AI techniques or utilizing AI systems to make them safer, more explainable,

and more trustable. Actions in this direction are key issues considered by CIS technical committees. All industrial efforts in this direction will be examined with interest.

I hope to have the opportunity to meet you in person at one of the CIS conferences this year and I wish you a safe and happy year 2021.

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Call for Papers for Journal Special Issues

Special Issue on "Knowledge Transfer in Evolutionary Optimization"

Journal: IEEE Computational Intelligence Magazine

Guest Editors: Liang Feng, Handing Wang (hdwang@xidian.edu.cn), Yaochu Jin, and Kay Chen Tan

Submission Deadline: February 1, 2021

http://www.bdsc.site/websites/KTEO/KTEO.html

Special Issue on "Explainable and Trustworthy Artificial Intelligence"

Journal: IEEE Computational Intelligence Magazine

Guest Editors: José M. Alonso (josemaria.alonso.moral@usc.es), Corrado Mencar, and Hisao Ishibuchi

Submission Deadline: February 15, 2021

https://sites.google.com/view/special-issue-on-xai-ieee-cim

Special Issue on "Deep Learning for Earth and Planetary Geosciences"

Journal: IEEE Transactions on Neural Networks and Learning Systems

Guest Editors: Antonio Paiva (arpaiva@ieee.org), Weichang Li, Maarten V. de Hoop, Chris A. Mattmann,

and Youzuo Lin

Submission Deadline: March 12, 2021

https://cis.ieee.org/images/files/Documents/call-for-papers/tnnls/SI on Deep Learning for Earth and Planetary

Geosciences.pdf

Special Issue on "Emerging Computational Intelligence Techniques to address Challenges in Biomedical Data and Imaging"

Journal: IEEE Transactions on Emerging Topics in Computational Intelligence

Guest Editors: M. Tanveer (mtanveer@iiti.ac.in), Chin-Teng Lin, Chuan-Kang Ting,

and Javier Andreu Perez Submission Deadline: March 31, 2021

https://cis.ieee.org/images/files/Publications/TETCI/SI19 CFP ECI BDI.pdf