



**Politecnico
di Bari**

Name of the Candidate:

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Candidature for:

Vice president of the IAHR

Statement

I am glad to apply as a candidate for the position of IAHR Vice-President (VP). Since the beginning of my academic career I have been an active member of IAHR and I have played a full part in supporting IAHR initiatives and attending IAHR Congresses and specialist IAHR-sponsored symposia. In addition, I have contributed directly to the growth and development of IAHR by means of particular leadership roles. So far, my activities in the IAHR in this regard were:

Since September 2009 - July 2015:

Editor of IAHR magazine *Hydrolink*.

Originator and Developer of the concept of the IAHR Media Library and its delivery to the IAHR as a functioning teaching/research tool and asset.

September 2009 - July 2011:

President of the IAHR Education and Professional Development Section (IAHR EPD Section).

Dec. 2007 – 2009

Secretary of the IAHR Education and Professional Development (EPD) Section.

At present, my current activities in the IAHR are:

Since 21st June 2018 - present: Associate Editor of the "Journal of Hydraulic Research".

Since 2005 - present: Editor of the web resource for the storage and dissemination of photographic, animation and video material relating to hydraulics, hydrology and water resources IAHR Media Library www.iahrmedialibrary.net

Since 2005 - present: Member of the Fluid Mechanics Committee of IAHR www.iahr.org.

The IAHR Media Library is a web resource for the storage and sharing of photographic, animated and video material of hydraulics, hydrology and water resources including photos of technical interest, films of technical interest, other similar material, with brief technical descriptions, an adequate classification system, an identification of technical areas. It is characterized by new technologies and media to provide platforms for communication between members, sharing knowledge and resources and promoting e-learning.

Hydrolink has been developed in its present form as a highly-effective communication system between IAHR and its members. It has also been established as a balanced publication occupying a much-required niche in which research developments, technical advances, interviews, industry issues and news are combined into a highly accessible and timely document. *Hydrolink* is particularly valuable to early career water scientists and engineers and, as a face of IAHR, it serves as a very effective recruitment tool for those not yet IAHR members.

I am professor of Hydraulics at the Polytechnic University of Bari (Italy), with a PhD in Hydraulic Engineering for the Environment and Land. I serve as Chief Scientist of the huge *Coastal Engineering Laboratory – LIC* (which is an associated partner of the EU Infrastructure Network *HYDRALAB*), Member of the board of directors of the *National Consortium of Universities for Marine Sciences (CoNISMa)* for the Polytechnic University of Bari, elected representative of Academic Senate of the Polytechnic University of Bari and Coordinator of the PhD course in "Environmental and Building Risk and Development".

In 2021, I was appointed as an expert member of the ministerial commission for the preparation of the National Research Plan - PNR 2021-2027 for the section "Knowledge and technological innovation and sustainable management of marine ecosystems", in the area "Food, bioeconomy, natural resources, agriculture, environment ". I am an Associate Editor of many international journals, such as *Scientific Reports-Nature*, *Journal of Hydraulic Research* and *Environmental Fluid Mechanics* and I am a member of the Editorial Panel for *Proceedings of the UK Institution of Civil Engineers - Engineering and Computational Mechanics* I have been an invited speaker for several national and international conferences, such as the International Conference on *Climate Change: Impacts & Responses*, April 2019, Pryzbyla Center, The Catholic University of America, Washington, D.C., USA, where I was awarded

the Certificate of Appreciation of the Engineering Center for Care of Earth (Ecce). I am the person in charge of the Polytechnic University of Bari's participation in several formal international academic Agreements with the University of Tennessee (USA) and the University of Notre Dame (USA), together with the Agreement Erasmus+ Programme with TU Wien, Austria and the Agreement with LEGI UMR 5519 CNRS, France.

I am author of 103 papers in international journals, 81 contributions in books, 53 contributions in conference proceedings and 10 books. My papers have about 1300 citations and I am within the top 2% of scientists of their main subfield discipline during the calendar year 2019 (Ioannidis JPA, Boyack KW, Baas J (2020), Updated science-wide author databases of standardized citation indicators. PLoS Biol 18(10): e3000918. <https://doi.org/10.1371/journal.pbio.3000918>).

Below are some strategic guidelines that I would like to pursue as a VP within IAHR:

1. Vision

The IAHR must be the world-leading association for hydro-environment engineering and research accessible to a wide community of academic researchers and practitioners.

2. Mission

IAHR fosters a global network of researchers and practitioners of hydro-science and engineering by:

- Promotion, support and encouragement of fundamental internationally-leading research
- Innovation in hydro-science and transferring emerging knowledge into practice
- Informing policy and management through hydro-science
- Sharing knowledge through education and professional development
- Providing a sustainable platform for superior member services

To reach the above-mentioned aims, IAHR must be more active in all the continents (specific actions will be supported for activities for developing Countries) supporting international programs that enhance quality of life, promote the profession, advance technical practices, raise awareness of pressing global water issues and prepare civil engineers for tomorrow.

Planned contributions that we can assume soon/in a short period

HydroLink and all the IAHR publications could be used to strengthen the informing of policy and management.

IAHR Media Library could be better used to increase/improve the IAHR involvement in the educational areas, where a stronger link with the UNESCO Institute for Water Education (Delft) must be pursued.

The above-mentioned initiatives could also be very useful to access funds necessary for the life of IAHR.

Planned contributions that we can assume soon/in a short or medium period

To reach the missions of the strategic plan, IAHR should be (more) present with some representatives in the hydro-environment engineering and research EU projects. This aim can be reached asking our people (members and people having positions in university consortia, professional associations, in the European Research Council) to enable IAHR to be associate members of the university consortia and professional associations. Furthermore, IAHR must be present as a research association in the main European research and engineering grant council/association.

The symbiotic relationship requires the establishment of a sort of exchange, where, against the direct participation of IAHR in European boards and/or research/professional projects, IAHR will make available its know-how made up of people, associated laboratories, expertise and organization of thematic conferences.

In other words, we must strengthen our association trying to have our delegations/representations in the boards of the main research and engineering organizations that will enable us to attract funds.

For example, the European Commission has launched the Marine Strategy Framework Directive (http://ec.europa.eu/environment/marine/index_en.htm). The Marine Directive aims to achieve Good Environmental Status (GES) of the EU's marine waters by 2020 and to protect the resource base upon which marine-related economic and social activities depend. It is the first EU legislative instrument related to the protection of marine biodiversity, as it contains the explicit regulatory objective that "biodiversity is maintained by 2020", as the cornerstone for achieving GES. In this project, our association should be (more) present in the proper commissions when the preparation of the documents of the European Commission Boards starts and/or when the research and engineering proposals are produced. In other words, IAHR must provide the scientific/engineering impetus for the EU to protect and clean up its rivers, coasts, seas, and oceans as part of an integrated strategy that will enable us to use them sustainably. It is important to highlight that the philosophy of IAHR involvement with large regional and inter-governmental initiatives has global relevance also.

Important and specific actions must be implemented for the involvement of young researchers and engineers, in order to provide them with proper training on the issues of environmental protection and climate change.

The Green Deal requires us to look to the future of the economy and society by rethinking the concept of sustainability not as a constraint but as an opportunity to maximize the efficiency levels of the blue economy while preserving the natural resources essential to human well-being. To this end, a holistic and intersectoral approach is essential, capable of enhancing synergies to increase effectiveness and enhance the impact of the actions to be

taken. Energy saving and efficiency, digitalization, and the principles of the circular economy as tools to support the blue economy necessary for restoring the natural ecosystems on which it insists and enabling them to ensure the sustainable use of resources. The IAHR must lead all these actions trying to speed up and maximize analysis campaigns and action plans for resilience and mitigation of the effects of climate change and allow the optimization of the use of natural and energy resources by reducing waste.

These will be the actions that I will try to carry out if I am elected VP.

Sincerely,

Michele Mossa

A handwritten signature in blue ink, appearing to read "Michele Mossa", enclosed within a blue oval shape.