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Editorial

IBRACON and Scientific and Technological Research in Brazil

With the arrival of the date of commemoration of the Golden Jubilee of the Brazilian Concrete Institute, to take place in June 2022, the Editor-in-Chief of RIEM Journal, Prof. Dr. Guilherme Parsekian, decided along with the Executive Board that the editorials of the journals published in this period should tell the history and contribution of the Institute to the development of concrete engineering in Brazil. It was up to me, honorably, to write this first editorial.

The Institute was founded in 1972 by visionaries who realized the importance of creating a space for valuing the exchange and technical discussion among professionals in the area. In the early 1970s Brazil was already living in the period known as an "economic miracle", under the management of the military dictatorship that obtained many resources and investments from abroad. The Central Bank, BNH, Embratel and more than 270 other state-owned companies were created, reaching the peak of national GDP growth of 11.1%.

As a result, there was a lot of investment in general, and specially in infrastructure construction putting the country's civil engineering in new construction challenges, for example sanitation and underground metropolitan train, durable, watertight, and resistant. Frequent accidents and even tragedies such as the collapses of the traffic bridge Paulo de Frontin in RJ, Gameleira in Belo Horizonte and even the Rio-Niterói bridge that victimized IPT engineers from São Paulo, among other minor accidents, contributed to demonstrate that without knowledge and in-depth expertise in design and experience in construction technology, the challenges would not succeed.

IBRACON then started from a congress whose main theme was the concrete permeability. The voluntary contributions of IPT, USP and ABCP professionals, among others, had a decisive role in this beginning. The correct understanding that Congresses is one of the most important resources for knowledge development lasted for several years and is still one of the noble alternatives of IBRACON in fulfilling its Institutional mission.

It should be registered here that it was also at this time that the country began, modestly, *its strictu sensu graduate programs,* first with master's degrees and later with doctorates, including at the Polytechnic School of USP, because CNPq and CAPES, founded in 1951, only began to have the current attributions in 1974 determined by a presidential law.

The first IBRACON's congresses cannot be called scientific because in fact they were organized from inviting distinguished professionals to participate and share their knowledge. Also, the few graduate programs in the country in the concrete area, had no sufficient students, professors, and critical mass to demand local scientific congresses.

Little by little a process of paper calls was created, embryonic scientific committees were formed, and the congresses were molded to the international standards. Nowadays they are recognized as highest level of excellence. They receive contributions from more than a hundred research centers recognized and registered in CNPq and CAPES, and more than seven hundred new articles are submitted annually.

In the 1990s it became clear that another tool needed to be created and the CONCRETO & Construções Magazine was then launched. However, this Magazine does not intend to meet international protocols of scientific journals, although it includes scientific papers in its content. It was then at the beginning of the century/millennium, in its first decade, that the need to constitute a scientific journal of international scope and standard became evident.

International entities, such as ISI, SCOPUS, ELSEVIER, and many others, during this period, organized to create a database and to classify journal publications in the world, theoretically separating chaff from wheat, that is, distinguishing what should be considered science and innovative technology from what is about practicing engineering and applied science.

Aware of the need to expand its scope and follow the international movement, in the early 2000s IBRACON invested heavily in the creation of initially two scientific journals, "IBRACON Materials Journal" and "IBRACON Structural Journal". Those journals provided a vehicle of quality and international standard to the entire Brazilian community, from research centers, universities, and public agencies, allowing them to publish their research and thus to be properly evaluated, promoting their academic and professional careers.

In a short time, it was clear that the ideal would be to join the two journals, since many of the articles' topics overlap. It was the begging of the current IBRACON Structures and Materials Journal or RIEM from its Brazilian Portuguese name "Revista IBRACON de Estruturas e Materiais" in 2008. One cannot fail to quote the outstanding voluntarism and competence of Prof. Dr. Tulio Bittencourt and Prof. Dr. José Luiz Antunes de Oliveira e Sousa, who led the process and "*carried the piano"* in the early days of this journal, now recognized and established nationally and internationally.

Nor we can omit the huge concern of the Brazilian community with the future of science and technology in the country, at this time when it is reported that the Ministry of Science and Technology will receive only 13% of its budget for 2022. Scientific and technological knowledge, its generation, dissemination, transference, absorption, and application, is one of the main and indispensable factors for the development of any country.

In the modern world, the relations between knowledge and power, knowledge and development, knowledge and technology mark economic differences, trade positions, regional leaders, and even military power. Negligent countries are punished with an unwanted technology dependence.

Conscious Brazilians aspire to independence, sovereignty, and technological autonomy, dependable on an adequate research structure. The ability to organize, produce and articulate knowledge, to create development and improves the quality of life of society. This requires the incentive to scientific research that is born in research centers and universities.

IBRACON will not refrain from its original role, envisioned by visionaries, which is to support research in Brazil, being a strong instrument for the dissemination and valorization of knowledge. Supporting research centers and universities is critical to the healthy development of a strong and autonomous nation.

Paulo Helene
President
2019-2021 Biennium