



*Editorial*

## OnBoard Knowledge Journal: Strengthening Maritime, Naval, and Riverine Research in Colombia

### OnBoard Knowledge Journal: Impulsando la Investigación Marítima, Naval y Fluvial en Colombia

The Escuela Naval de Cadetes "Almirante Padilla" (ENAP) continues to consolidate its position as a regional and international benchmark in scientific, technological, and innovative development within the naval, maritime, and riverine domains, through the generation of applied knowledge that contributes to addressing problems and needs in the context of security and defense.

In this regard, and within the framework of the celebration of its 90th anniversary, the Escuela Naval de Cadetes "Almirante Padilla" launches its most recent editorial project, the OnBoard Knowledge Journal, conceived as a leading platform for the dissemination of research in the fields of engineering, technology, and social sciences, with particular emphasis on the four R&D&I programs of the Colombian Navy: Strengthening Naval Power; Strategy, Institutional Management and Logistics Processes; Development of Maritime and Riverine Interests; and the Antarctic Agenda.

Likewise, as part of the commemoration, several activities highlighted the institution's commitment to education and scientific development. Among them, special mention is given to the International Symposium on Science, Education, and Maritime Development: "90 Years Sailing Towards Knowledge", and the Former Directors' Seminar: "ENAP Through Time: 90 Years Sailing into the Hearts of Colombians". These events provided spaces for analyzing and describing the institutional evolution, naval leadership, and ENAP's contributions to the maritime development of the nation.

The OnBoard Knowledge Journal has been conceived as an open-access platform with a permanent call for submissions, ensuring that all published articles are freely available online without restrictions, thereby fostering global impact and broader dissemination within the scientific and professional community.

In this inaugural volume, notable contributions in engineering and technology address topics such as the application of fuzzy logic in the management of hybrid renewable energy systems, the use of the Use Case Points (UCP) method to enhance efficiency in software development planning, the implementation of virtual reality as a high-value educational tool, and the exploration of alternatives to mitigate congestion and overload in Wi-Fi networks through SDN and artificial intelligence.

With its first issue, the OnBoard Knowledge Journal marks the beginning of a new stage in the dissemination of science and research led by the alma mater of Colombia's naval officer corps, further strengthening the recognition of the Escuela Naval de Cadetes "Almirante Padilla" as Colombia's Maritime University.



We express our most sincere gratitude to the authors, reviewers, members of the editorial/scientific committee, and collaborators who make this project possible, as well as to the readers who join us today on this academic journey. We cordially invite you to explore the pages of this first volume and to join this collective effort to generate, share, and strengthen scientific and technological knowledge in service of the country.

REAR ADMIRAL JOHN HENRY RUIZ MURCIA  
Director Escuela Naval de Cadetes "Almirante Padilla"