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# Carinthia Nature Tech: a new forum for integrating natural sciences and emerging technologies

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New scientific fields require new fora and platforms for publication. The integration of natural sciences and conservation biology with emerging technologies and the digitization of the entire research sector is what we refer to as *Nature Tech*. The new journal, *Carinthia Nature Tech*, is dedicated to these methodologies, tools and techniques.

This new journal can now be presented with pride. The inaugural issue was published online on October 17, 2024, during a small event at the kärnten.museum Klagenfurt. This launch followed three years of intensive preparation, during which the journal was developed in terms of content, editorial focus, and organizational structure, overcoming numerous challenges. However, the true challenge begins now: the journal will be published regularly, with the aim of achieving the highest scientific standards in the medium term. *Carinthia Nature Tech* will significantly enhance Carinthia's standing in the realms of science, economy, and culture – much like the work of the *Natural Science Association for Carinthia* (NWV, Naturwissenschaftlicher Verein für Kärnten), which has shaped and influenced the region since its founding in 1848. By focusing on biodiversity, ecosystems, and natural landscapes, the journal also aims to contribute to the protection and preservation of Carinthia's unique natural beauty and ecological heritage, extending its impact far beyond the region's borders.

*Carinthia Nature Tech* is published in collaboration with NWV and *Carinthia University of Applied Sciences* (CUAS, Fachhochschule Kärnten). The collaboration between the two Carinthian institutions is formalized in a long-term cooperation agreement. The new journal aims at integrating natural sciences and emerging technologies, specifically addressing geo-informatics, robotics and sensorics, information technology and data sciences and molecular biological methods as well. This interdisciplinary approach signifies the convergence of traditional scientific expertise with cutting-edge engineering and information technology. Leveraging novel and disruptive technologies, methods, and devices, the journal addresses methods to assess, monitor and manage biodiversity and geodiversity within the realms of conservation, restoration, and natural resource management.

The long-standing journal *Carinthia*, founded in 1811, laid the foundation for scientific thinking in the federal state of Carinthia. It is the oldest scientific journal of Austria and among the oldest in Europe. *Carinthia Nature Tech* will henceforth be published semi-annually as part 3 of the scientific journal *Carinthia II* (*Carinthia II / Teil 3*). It envisions citizen participation, inclusivity, and open science strategies. The journal is peer reviewed, published online, and shall be indexed on a mid-term perspective.

Alongside the foreword from the editors, the journal features five sections that encompass a variety of text formats. In addition to the *Full Articles*, which showcase outstanding and excellent research results, the journal includes *Short Articles* and *Short Notes*. These sections are specifically designed to offer young scientists and early-career researchers the opportunity to gain experience in publication, present preliminary findings or promising

approaches, and invite discussion. The *Short Notes* section, in particular, allows less experienced authors to receive substantial support from the editors or the editorial board in preparing their contributions, as these submissions are not peer-reviewed. In the concluding *Book Reviews* section, selected new publications are presented and critically discussed.

The inaugural issue of *Carinthia Nature Tech* includes two peer-reviewed *Full Articles*, one peer-reviewed *Short Article*, three *Short Notes*, three *Book Reviews*, and author guidelines, with additional supplementary materials provided for certain contributions. This diverse range of content types establishes the thematic focus of the new journal and illustrates the various formats available for future submissions.

The contributions in this inaugural issue are primarily from a relatively small group of authors affiliated with the *Carinthia University of Applied Sciences* and the NWV, and this was intentional. It allowed us to work closely with the authors to clarify editorial and formal questions arising from the preliminary author guidelines in an iterative process. However, the aim is naturally to attract a broader circle of authors to the journal over time, thereby significantly increasing diversity in terms of institutions, disciplines, and approaches. We hope that the journal will draw significant contributors and gradually expand its readership.

We warmly invite researchers, practitioners, and scholars from diverse fields to contribute to *Carinthia Nature Tech*. By submitting your work, you will join a dynamic community dedicated to advancing the integration of natural sciences with emerging technologies. We encourage contributions that present innovative approaches, preliminary findings, and novel methodologies. Detailed author guidelines are available to assist with the submission process, and our editorial office is readily available to provide further information and support. In our commitment to fostering transparency and inclusivity, *Carinthia Nature Tech* will adopt an open access policy, ensuring that all published research is freely accessible to a global audience. In the long term, we also aim to establish an open data policy, enabling greater data sharing and collaboration within the scientific community. We look forward to your contributions and to shaping the future of this exciting interdisciplinary field together.

Certainly, establishing a new journal in a dynamic international environment is a significant challenge. The first step has been taken, but many more must follow. Our special thanks go to all those who contributed to this inaugural issue, particularly the authors or author teams. Special thanks also extend to the editors, the editorial office, and members of the editorial board who have propelled this inaugural issue forward with dedication and effort. We also express our deepest gratitude to our reviewers, whose anonymous and thus unnamed work is an invaluable contribution to the quality and quality assurance of the articles. It is important to note that, with the exception of the editorial office, all contributors and collaborators work on a voluntary basis. In this context, we are confident that this journal will prove its worth and enjoy a long and successful future.

## ZUSAMMENFASSUNG

### **Carinthia Nature Tech: eine neue Zeitschrift für Naturwissenschaften und innovative Technologien**

Die neue Zeitschrift *Carinthia Nature Tech* widmet sich der Integration von Naturwissenschaften und disruptiven Technologien, insbesondere in den Bereichen Geoinformatik, Robotik, Sensorik, Informationstechnologie und molekularbiologischen Methoden. Ziel ist es, neue Wege zur Bewertung und zum Management von Biodiversität und Geodiversität zu erschließen. Die Zeitschrift wird in Kooperation zwischen dem Naturwissenschaftlichen Verein für Kärnten und der Fachhochschule Kärnten veröffentlicht. Die erste Ausgabe erschien am 17. Oktober 2024. *Carinthia Nature Tech* ist ein eigenständiger Teil der *Carinthia II*, einer der ältesten wissenschaftlichen Zeitschriften Europas.

Ab sofort sind Autorinnen und Autoren eingeladen, Beiträge einzureichen. Es gibt vier Kategorien von Beiträgen, *Full Papers*, *Short Papers*, *Short Notes* und *Book Reviews*. Diese Formate bieten sowohl etablierten Wissenschaftlern als auch Nachwuchsforschern die Möglichkeit, ihre Forschungsergebnisse zu veröffentlichen und zur Diskussion zu stellen. Nähere Informationen bieten die Autoren-Richtlinien.

Für die konsequente Erarbeitung des ersten Bandes der *Carinthia Nature Tech* gilt besonderer Dank den Autorinnen und Autoren, dem Redaktionsteam, dem Gutachterkreis sowie allen Kolleginnen und Kollegen für die sprachliche Überarbeitung der Artikel. Alle Beteiligten, mit Ausnahme des Redaktionsbüros, arbeiten ehrenamtlich. In diesem Vorwort kommt die Überzeugung zum Ausdruck, dass sich die junge Zeitschrift erfolgreich entwickeln und etablieren wird und damit auch einen Beitrag zum Wissenschafts-Standort Kärnten leisten kann.

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