

# Ecological Manifesto of the International Micro and Nano Engineering Society (iMNEs) September 2023

## Background:

As a result of human activities, safe amounts of CO<sub>2</sub> and other greenhouse gases in the atmosphere have been exceeded (IPCC, International Panel on Climate Change) speeding climate change. Among the induced consequences, health hazards, collapse of biodiversity, impacts on terrestrial and marine ecosystems, extreme weather, and resource depletion expose our societies to large scale and mid/long-term risks.

The first Earth Day in 1970, moved the “climate issue” from a bespoke niche of environmental and scientific concern to an issue of general awareness among the populations. Despite awareness, support, and the urgency of the climate issue, nations, institutions, and organizations have been slow to act in mitigating climate change. We believe that the magnitude of this multi-faceted ethical issue demands a response. Therefore we, through this manifesto, declare our ecological commitment in order to guide our work and our future practices.

## Intent:

iMNEs is an international scientific, technological and industrial community which meets annually during "Micro and Nano Engineering" (MNE) conferences, in order to exchange research work and innovations in the field of Micro and Nano Technologies.

In awareness of the climate emergency, we want to take steps to mitigate our own carbon-releasing activities both in our jobs and in our organization. Moreover, our community wishes to embark on the path of innovative convergence between Engineering and Ecology. We want to think about, experiment, and implement a form of ecologically inspired engineering in the multidisciplinary field of Micro- and Nanotechnologies. We are convinced that this will contribute to influence our future societal choices and open up new avenues for sustainable research and applications.

## Actions:

We - as supporters of this manifesto - are committed to support and implement two categories of actions.

The first category of actions is dedicated to our practices and aims to critically assess and minimize the ecological impact of our activities. Particular emphasis will be placed on the organization of the annual MNE conference. The iMNEs community will be regularly involved in the selection of good practices of conference organization. A monitoring of the carbon impact of the different editions of MNE will be carried out and measures to reduce CO<sub>2</sub> emissions will be continuously implemented.

The second category of actions is dedicated to initiating, encouraging and supporting new themes related to ecological and environmental issues. Inspirational speakers will be invited, awards will be offered to pioneering actors in this field, new dedicated sessions will be organized during the conferences. The purpose will be to disseminate awareness of ecological issues, to introduce environmental sciences into our technological practices and to bring Ecology as a value for engineering at the same level as efficiency, functionality and cost.

## Conclusion:

Through this manifesto, we are calling on members of the iMNEs specifically and of the larger scientific community to reconsider the very nature of engineering and technology; to change our practices in research; and to search permanently for a responsible and sustainable relationship between engineering and ecology. We call to disseminate this ecological commitment. We encourage ideas and actions to increase awareness for ecology in our community and how to make our conferences and research activities more sustainable.

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