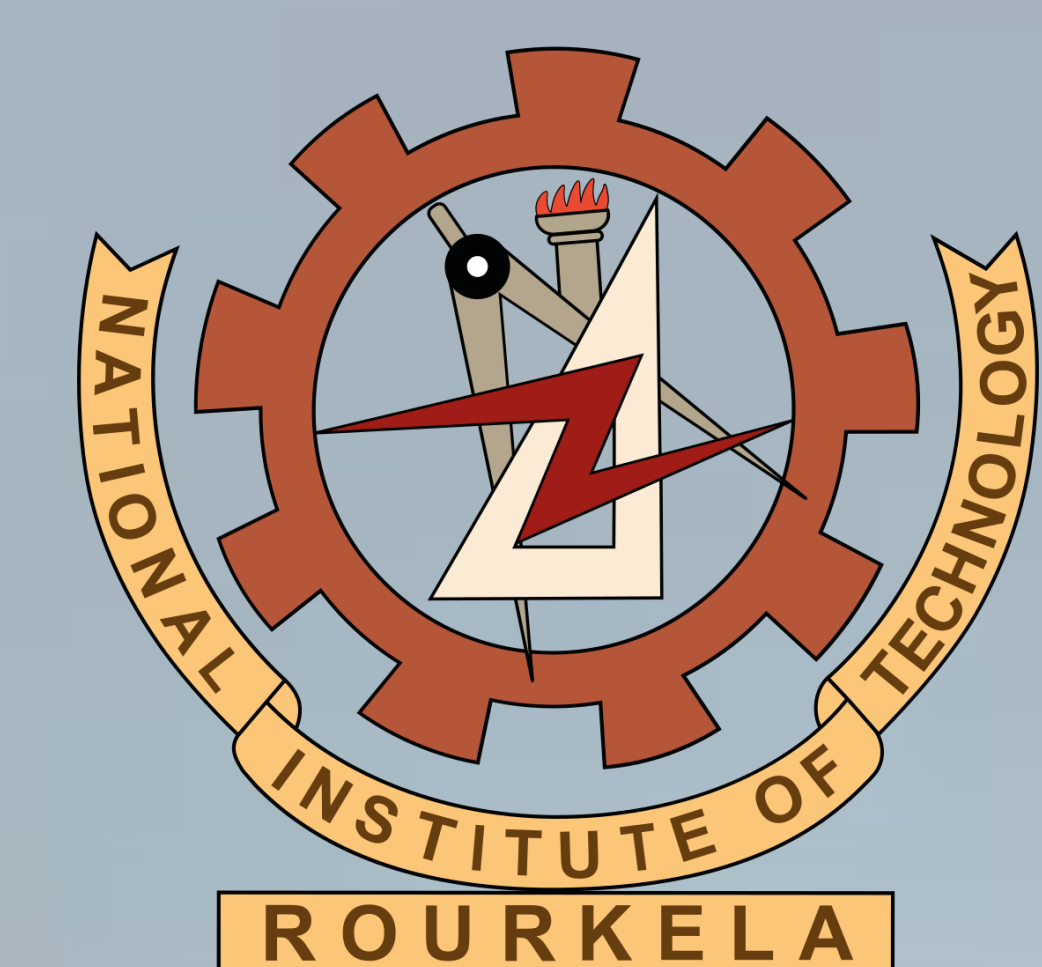




ONCE - 2026



National Conference

on

Observational and Numerical aspects of Compound Events (ONCE)

28th - 30th January 2026

National Institute of Technology
Rourkela,
Rourkela, Odisha

Organised by

Department of Earth and Atmospheric
Sciences,
National Institute of Technology
Rourkela, Rourkela

and

Indian Meteorological Society
Rourkela Chapter

Climate change is no longer a distant concern—it is driving more frequent and more intense extreme weather events across the globe. Recent years have revealed not only the devastating power of single climate extremes, but also the amplified societal impacts when these events strike close together in space or time. In our interconnected world, the ripple effects of such combinations can be especially severe, disrupting communities, economies, and ecosystems on an unprecedented scale.

Compound extreme events—such as droughts fueling wildfires, or heatwaves intensifying drought conditions—are becoming alarmingly common. These overlapping crises are more complex, harder to predict, and far more destructive than the sum of their parts. To protect societies and ecosystems, we must deepen our understanding of how these factors interact, and develop better tools for forecasting, risk assessment, and mitigation.

Research on correlated climate extremes is advancing rapidly, bringing together expertise from climate dynamics, atmospheric science, boundary-layer meteorology, statistics, climatology, policy, and the social sciences. Projections suggest that changes in circulation patterns and regional feedbacks, such as land-atmosphere interactions, are likely to further intensify these risks. At the same time, cutting-edge advances in spatial statistics and extreme-value theory offer powerful new approaches to untangling this complexity.

This Conference calls for original research that tackles these urgent challenges. We invite contributions on the dynamics, forecasting, and risk assessment of compound extreme events, as well as strategies for adaptation and mitigation. Studies integrating modeling, theory, and observational data are especially encouraged. Together, we can shape a clearer understanding of these escalating threats—and chart pathways to reduce their impact. Keeping this in view, ONCE-2026 deliberates on the following subthemes:

- Compound extreme events: Diverse approaches by observations and numerical modeling
- Concurrent Events over the Indian subcontinent
- Sequential or persistent compound extreme events
- Impact of land use and land cover changes on compound events
- Analysis and prediction of compound extremes using AI/ML/DL techniques etc.
- Systemic Risk: Identification, Response and Societal Feedbacks in disaster risk reduction
- Roles of oceanic and atmospheric processes in the development of compound extremes
- Compound extremes and Air Pollution Interactions
- Impact of compound extremes on Agriculture, livestock, fisheries

CALL FOR PAPER AND ABSTRACT SUBMISSION

The original research papers from India and abroad, covering ONCE-2026 theme/sub-themes are invited for presentation. Authors may submit abstracts not exceeding 300 words.

IMPORTANT DATES

Abstract Submission Ends: 01st December 2025
Intimation on Acceptance: 05th December 2025
Online Registration Starts: 7th December 2025
Early Bird Registration Ends: 10th January 2026

REGISTRATION FEES

CATEGORY	BY 10 th January 26	ON SPOT
Students	₹ 3000/-	₹ 4000/-
Faculty and Researchers	₹ 5000/-	₹ 6000/-
Industry Professionals	₹ 7000/-	₹ 8000/-
Industry Exhibitions	₹ 50000/-	

The Registration Fee can be paid to following bank account.

Bank Name : State Bank of India
Branch : NIT Rourkela
Branch Address : NIT Rourkela, Rourkela 769008
Account Number : 36734418111
IFSC Code : SBIN0002109
Account name : CONFERENCE NIT ROURKELA
MICR Code : 769002007
SWIFT Code : SBININBBI37

PUBLICATIONS

Selected conference papers will be considered for publications in peer reviewed (SCI/Scopus indexed) reputed journal(s) as special issue(s). Scientific committee will evaluate the papers and recommend the full paper submission.

TRANSPORT AND ACCOMMODATION

ONCE-2026 has limited resources for offering travel and accommodation support, and all participants are expected to secure support from their own sources. However, some support may be extended to a few case-to-case basis subject to the availability of resources, with priority given to students without financial support.

Industry Presentation & Exhibition Special sessions are planned to provide a platform for industry/entrepreneurs. A presentation slot of 15 to 20 minutes duration will be allowed for selected industry/entrepreneurs. Provision is also made for vendors to exhibit their products and services.

VENUE: National Institute of Technology Rourkela,
Rourkela, Odisha, India.

LOCAL ORGANISING COMMITTEE

PATRON

Prof. K. Umamaheshwar Rao
Director, NIT Rourkela

CHAIRMAN AND SECRETARY

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