

MAKING THE WORLD SAFER TOGETHER

CESAR will contribute to:

- Improved understanding of safety risks associated with hydrogen technologies
- Strengthened links between academia, industry, and public authorities
- Development of practical safety solutions with real-world applications
- Internationalization of safety research and education

CONTACT

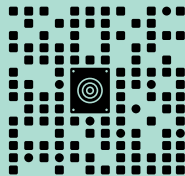
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VSB TECHNICAL
UNIVERSITY
OF OSTRAVA

FACULTY
OF SAFETY
ENGINEERING

CENTRE OF EXCELLENCE
FOR SAFETY RESEARCH



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CESAR (Centre of Excellence for Safety Research) is an international initiative focused on advancing safety research, particularly in hydrogen technologies and alternative energy sources. The project aims to enhance scientific excellence, foster international collaboration, and develop innovative methodologies to address global safety challenges.

The CESAR project is a five-year initiative funded by the Horizon Europe program under the ERA Chairs scheme and will establish a leading-edge research center at the Faculty of Safety Engineering, VSB – Technical University of Ostrava, under the leadership of Prof. Ernesto Salzano from the University of Bologna.

TEAM

Prof. Ernesto Salzano

is the ERA Chair at the Center of Excellence for Safety Research (CESAR) at VSB – Technical University of Ostrava. He brings top-level expertise in industrial safety to the CESAR project, supporting research excellence and international collaboration.

He is also Full Professor of Chemical Plant Design at the University of Bologna, where he serves as Director of Studies in Chemical and Process Engineering, and the Italian delegate to the EFCE Working Party on Electrostatics..

Previously, he worked at the National Research Council of Italy (CNR), leading the Explosion Laboratory and coordinating the Italian Competence Centre for Industrial Risks for Civil Protection.

His main research interests include

- Chemical process safety and runaway reactions.
- Accidental deflagration and detonation (fires and explosions).
- Risk assessment for external events (domino effects, natural hazards, security.)
- Hydrogen and cryogenic fuels, oxyfuel combustion.

KEY GOALS

- Enhance research capacity and international competitiveness in safety research.
- Support systematic changes by fostering internationalization and a strong research culture.
- Connect with European research networks and projects to strengthen collaborations and innovations.

Research Areas

CESAR focuses on research in:

- Hydrogen Safety: Developing innovative solutions to ensure the safe use and storage of hydrogen.
- Alternative Energy Sources: Exploring the safety challenges of emerging energy technologies.
- Risk Analysis and Management: Creating advanced methodologies for risk identification, assessment, and mitigation.

Key Activities

- Cutting-edge research in process safety and hydrogen-related risks
- Collaboration with leading research institutions, industries, and policymakers
- Organization of international conferences, workshops, and scientific seminars
- Development of safety guidelines and best practices for industrial applications

