

GENOVA, ITALY
March, 19th - 21st, 2025

Save the date!

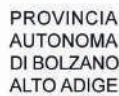


International Forum on
**RESCUE in
DIFFICULT
ENVIRONMENT**

*New Advances in Mountain, Sea and Space Rescue. A
new approach against the consequences of climate change*

Preliminary Program

with patronage of



International Climbing and Mountaineering Federation
UNION INTERNATIONALE DES ASSOCIATIONS D'ALPINISME



UIAA



ISMM
International Society
for Mountain Medicine

Dear Colleagues and Esteemed Participants,

*It is with great enthusiasm and pleasure that we extend to you a warm invitation to the International Forum on "**RESCUE in DIFFICULT ENVIRONMENT: New Advances in Mountain, Sea and Space Rescue**". This congress, taking place in **Genoa, Italy from March 19th to 21st, 2025**, aims to foster innovative approaches and solutions in the field of rescue operations, particularly in the face of the ever-growing challenges posed by climate change.*

Our forum brings together leading experts, researchers, and practitioners from around the globe to share their insights and advancements in mountain, sea, and space rescue missions with a specific interest in the healthcare aspects of rescue operations. This event provides a unique platform for interdisciplinary collaboration, where new ideas and cutting-edge technologies will be discussed to enhance our collective response capabilities in difficult environments. Additionally, we will delve into the specialized fields of mountain, diving, space, expedition and wilderness medicine.

As we face the consequences of climate change, it is imperative that we adapt and develop new strategies to ensure effective rescue operations. This congress will address critical issues and present pioneering techniques that will shape the future of rescue missions, ensuring safety and resilience in extreme conditions.

We look forward to your active participation and contributions to what promises to be an enlightening and groundbreaking event. Let us unite our efforts to advance the field of rescue operations and make significant strides in protecting lives in the most challenging environments.

Warm regards,

Dr. Luigi Festi

Dr. Federico Emiliano Ghio



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Forum Director	Luigi Festi
President	Giacomo Strapazzon, Hermann Brugger, Osvaldo Chiara, Gianfranco Parati, Michael Wanscher
Organizing and Scientific Committee	Federico Emiliano Ghio, Urs Hefti, Lorenza Pratali, George Rodway, Natalie Holzl, Peter Paal, Marika Falla, Simona Mrakic Sposta, Giovanni Vinetti, Vittore Verratti, Stefano Trinchi, Bruna Catuzzo, Francesco Marchiori, Gege Agazzi, Desiree Pantalone, Alessandro Marroni, Simona Berteletti, Mario Milani, Alessandro Bacuzzi, Luca Carengo, Massimo Lombardo, Andrea Moscatelli, Fabrizio Iseni, Oscar Santunione
Organizing Secretariat	N O E M A  Via Orefici 4 - Bologna (Italy) - Ph. +39 051 230385 info@noemacongressi.it - www.noemacongressi.it



FORUM VENUE

Centro Congressi dei Magazzini del Cotone - Porto Antico di Genova

Calata Molo Vecchio n. 15 – Magazzini del Cotone, Modulo 5

CAP 16128, Genova



OFFICIAL LANGUAGES

English, Italian.



REGISTRATION FEES

€ 300 (22% VAT included)



HOW TO REGISTER

On-line on the website: <https://www.noemacongressi.it/en/> from 13th January 2025.

For further information please consult www.rescuedifficultenvironment.it or write an email to info@noemacongressi.it.



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FACULTY

Alessandro Alcibiade
Alessandro Bacuzzi
Cristiano Belfiore
Simona Berteletti
Mattia Bixio
Loredana Bessone
Marc Blancher
Gerardo Bosco
Hermann Brugger
Michele Burlando
Giulio Carcano
Luca Carenzo
Osvaldo Chiara
Paolo Comune
Claudia Dallari
Andrea De Bellis
Angela Donati
Macrì Enrico
Marika Falla
Stephen Fenton
Guido Ferretti
Luigi Festi
Jean Pierre Fosson
Lorenzo Gamberini
Hannes Gatterer
Alessandro Geddo
Federico Ghio
Tommaso Giacon
Savoca Gianluca
Guido Giardini
Les Gordon
Angelo Gratarola
Peter Hackett
Tamas Haidegger
Mark Hannaford
Frank Hartig
Wade Hawkins
Urs Hefti
Sharon Henry
Natalie Holzl
Chris Imray
Matthias Jacob
Andrew Kirkpatrick
Axel Krieger
Mijel Lofti
Massimo Lombardo
Andrew Luks
Darryl Macias
Alessandro Marroni
Fabrizio Masella
Kyle McLaughlin
Hubert Messner
Pierre Metrailler
Mario Milani
Monica Monici
Andrea Moscatelli
Simon Murray
Martin Musi
Peter Paal
Desiree Pantalone
Marcelo Parada
Gianfranco Parati
Lorenza Pratali
Chiara Robba
George Rodway
Nicola Rotolo
Steve Roy
Katie Russell
Giovanni Sabatino
Francesco Sauro
Tom Scalea
Federico Semeraro
Sven Christjar Skaiaa
Niccolò Stomeo
Giacomo Strapazzon
Guenther Sumann
Marco Tartaglione
Michael Tipton
Iztok Tomazin
Luca Tortorolo
Sylvain Tosetti
Stein Bastian von Tagen-Jordan
Francesca Verginella
Giovanni Vinetti
Beat Walpoth
Michael Wanscher
Dave Weber
Sebastian Wiberg
Jason Williams

OPENING

13:30	14:30	Registration	
14:30	15:00	Greetings from the authorities	
15:00	15:30	Lectio Magistralis	G. Parati

COLD INJURIES – LESSONS FROM CITIES, MOUNTAINS AND OCEANS

Chairpersons: H. Brugger, L. Gordon, P. Paal



Each lecture: 20 min

Hypothermia from the mountain to the sea	L. Gordon
Frostbites: a “orphan” disease?	C. Imray
Physiology of cold-water immersion	M. Tipton
ALS changes in hypothermic patients	F. Semeraro
ECLS in hypothermic patient: cerebral prognostication	M. Wanscher
Hypothermia and coagulation	P. Paal
Impact of climate change on human health at high altitude	G. Rodway

18:00	21:00	Welcome, event with alpinists & special guest
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08:30	09:00	Lectio Magistralis	H. Brugger
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MOUNTAINS: OLD AND NEW CHALLENGES WITH NEW VISITORS AND CLIMATE CHANGE

Chairpersons: N. Holzl, G. Strapazon, G. Giardini



Each lecture: 20 min

The pioneers of high-altitude sickness: a masterful story	P. Hackett
High altitude illnesses	A. Luks
Challenges for patients in the mountains	M. Falla
Search and rescue at altitude - new ICAR guidelines	K. McLaughlin
Challenges for athletes in the mountain	H. Gatterer
Avalanches accident: old and new threats	G. Strapazon
Hyperthermia: so important and so underestimated	D. Macias

11.15	11.35	<i>Coffee break</i>
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DIVING MEDICINE FROM BENCH TO BEDSIDE

Chairpersons: A. Marroni, M. Wanscher



Each lecture: 20 min

Real Time Wireless Physiological Telemonitoring of the Submerged Diver for research and emergency assistance purposes	A. Marroni
Keeping people alive during rescue - lessons from other scenarios?	M. Tipton
Biomarkers and cerebral outcome following cardiac arrest/cerebral hypoxia normo-/hypothermia	S. Wiberg
Hyperbaric therapy: new perspectives	G. Bosco
Stress and circadian rhythm	T. Giacon
Modern cave diving rescue technique with limited equipment	F. Hartig
Physiology of water immersion	G. Ferretti

13.30	14.30	<i>Lunch</i>
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WILDERNESS AND SPACE MEDICINE - WHAT TO LEARN FROM THE EXTREMES

Chairpersons: D. Pantalone, B. Walpoth, J.P. Fosson




Each lecture: 20 min

Experience from the Swiss cave diving team	GRIMM
ESA CAVES: simulating space expeditions in underground environments	L. Bessone
Terra X Cube: when extreme conditions are controlled	G. Vinetti
Fly! Challenges of disability in space	A. Alcibiade
The new frontiers of surgery in space missions: exposome and more	D. Pantalone
Submarine environment and similitude with space environment condition	M. Monici group
Surgical robot and AI in space and on earth	A. Krieger
The marriage of drone delivered resuscitative responses with telementored just in time guidance: 2 + 2 is 64	A. Kirkpatrick/W. Hawkins
Pharmaceuticals at low atmospheric pressure: implications for human space flight	S. Roy

Wound healing in space experiment (ESA-WHISPER project, ASI-SUTURE in space project)	M. Monici
Trauma care in space: how far the robotic and AI solutions?	T. Haidegger
Extreme Medicine: a global perspective	M. Hannaford

20.00	23.00	<i>Gala Dinner</i>
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 **Day 21/03/2025**

08.30	09.00	Lectio Magistralis	
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SEA RESCUE: EXPERIENCES FROM ALL OVER THE WORLD

Chairpersons: A. Gratarola, S. Gualandris



Each lecture: 15 min

Brain trauma foundation guidelines for the management of traumatic brain injury in austere environment	C. Robba
Sinistre in submarine rescue	Italian Navy 1
Hemorrhagic shock management in the context of special forces operations	Italian Navy 2
Norway: characteristics of helicopter hoist operations with intubated patients - experiences from the RNoAF 330 Squadron	S.C. Skaiaa
When tragedy strikes for the helicopter rescue crew rescuing in extreme environments	S. Murray
Denmark: The Praestoe mass drowning incident, very difficult rescue operation	Steen Kroyer Barnung
Sea Italian Coast-Guard: Organization of SAR	
Lake Italian Coast- Guard: Organization of SAR	

11.00	11.30	<i>Coffee break</i>
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MOUNTAIN RESCUE: EXPERIENCES FROM ALL OVER THE WORLD

Chairpersons: U. Hefti, M. Milani



Each lecture: 15 min

Rescue experience in Valais region	GRIMM
Valle D'Aosta rescue team experience	P. Comune
Scotland: Challenges for the pilots rescuing in extreme environments	S. Murray

Norway: Operating heavy helicopters in mountain rescue, a presentation of 330 squadrons super long line procedure	S.B. Von Tangen-Jordan
CNSAS 1 experience between sea and mountains	
Bavarian mountain rescue service	M. Jacobs

13:00	14:00	Lunch
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CNSAS 2 experience	S. Berteletti
France 1 rescue experience in Grenoble Region	M. Blancher
Limitations in Mountain Emergency Medicine	G. Sumann
Mountain rescue in Argentina: A general review of rescue organization in the Argentine Andes	M. Parada
Rescues in Aconcagua provincial park as a particular example in Andes	M. Lotfi
Andes: Rescue at El Chalten, what challenges?	C. Codo, L. Viamonte
France: ECASC (école d'application de la sécurité civile) in Chamonix, experience on Mont-Blanc	Pascal, G. Strapazzon
Slovenian rescue team experience	I. Tomazin
National park service mountain rescue	D. Weber

HELICOPTER RESCUE OPERATION FROM MOUNTAIN TO THE SEA AND BACK: WHAT FUTURE?

Chairpersons:

Round table with short presentation
Closure of the conference

SESSIONE PARALLELA

 Day 20/03/2025

TRAUMA MANAGEMENT: A COMMON THREAD FROM THE DIFFICULT ENVIRONMENT TO THE HOSPITAL TRAUMA CENTER

Chairpersons: O. Chiara, G. Carcano



Each lecture: 20 min

The Organization of trauma network: between present and future	O. Chiara
Hybrid damage control in hybrid room: a new option for a hybrid trauma surgeon	T. Scalea
Strategies in soft tissue injuries in civil and military settings	S. Henry
Thoracic trauma in difficult environment: what are the options?	N. Rotolo

Trauma care in extreme conditions - from austere environments to the hospital	N. Holzl
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11:00	11.30	<i>Coffee break</i>
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PRE-HOSPITAL EMERGENCY DEPARTMENT ORGANIZATION: WHAT FUTURE?

Chairpersons: C. Coniglio, A. Bacuzzi



Each lecture: 20 min

New technologies in surgery: from the operating room to the extreme environment, what future?	G. Carcano
Management of critically ill patients in austere environment	M. Bixio
Prehospital blood in Italy state of the art:	M. Tartaglione
The role of prehospital ultrasound in clinical decision making in austere and remote environments	L. Gamberini
Urban environments are extreme environments	C. Belfiore

13.00	14.15	<i>Lunch</i>
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EVENT MEDICINE AND MASS GATHERING IN EXTREME ENVIRONMENT: NEW ORGANIZATIONAL AND CLINICAL APPROACH

Chairpersons: F. Ghio, M. Lombardo, M. Squeo



Each lecture: 20 min

Ski Patrol	F. Ghio
Elite sporting event medical management	M.R. Squeo
World Athletics Label Marathons	L. Carengo
Delivering high quality clinical care during olympic winter sports	M. Lombardo
Delivering care during Fiji eco-challenge	N. Stomeo
High profile football games	A. Geddo

15.45	16.00	<i>Coffee break</i>
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EXPEDITION MEDICINE

Chairpersons: D. Macias, M. Musi



Each lecture: 20 min

Expedition medicine: from Sandia Mountains to Himalaya	D. Macias
The women's expedition to K2: insights for a new approach to high altitudes	L. Pratali
Death on the Nile managing heat stroke during expeditions	N. Stomeo
Expedition medicine in the Andes, teaching on expedition mode	M. Musi
Expedition medicine: the viewpoint of the expedition leader	F. Sauro
Expedition medicine: the viewpoint of the expedition doctor	P. Rubcich



Day 21/03/2025

PEDIATRIC WILDERNESS MEDICINE: TRAUMA AND EMERGENCY MEDICINE IN REMOTE AREA

Chairpersons: F. Verginella, L. Tortorolo, A. Tomaselli



Each lecture: 20 min

Children at high altitude: what perspectives with climate change?	H. Messner
Developing a pediatric urban search and rescue team	A. Moscatelli and VVFF
Child airway management: a hostile environment	A. Wolfer
Utah pediatric trauma network	K. Russell
Mobile pediatric ECMO	A. Moscatelli
Management of a child in difficult environment: what education/training?	M. De Luca
Burns: the first approach in children	A. De Bellis
Pre-hospital locoregional anesthesia in pediatric patients	S. Tosetti

EDUCATION AND TRAINING: A NEW APPROACH FROM THE MOUNTAIN TO THE SEA AND SPACE. ROLE OF DIFFICULT ENVIRONMENT SIMULATION

Chairpersons: L. Festi, L. Careno



Each lecture: 15 min

Diploma in mountain medicine and emergency medicine	J. Williams
Mountain medicine course on the Andes	M. Musi
Human performance and behaviour training in extreme environment	A. Donati
Cognitive appraisal in high stakes environment	L. Gamberini
Simulation for elite providers	L. Careno
Putting it all together: the master in mountain emergency medicine	C. Dallari
From CAVES to SPACE: using terrestrial analogues to train astronaut expeditionary behaviour	

Lunch

ORAL PRESENTATION SESSION



Each presentation: 05 min

14.30	15.30	SiMeM, UIAA, ICAR
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15.30		SiMeM Assembly
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This document is constantly updated. Please find the latest version of the program and the registration opening date on our website:

www.rescuedifficultenvironment.it

