

GENOA, ITALY

March, 19th - 21st, 2025



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





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 PORTO ANTICO - Sala Scirocco Libeccio

Magazzini del cotone - Modulo 8
16128 Genova



OFFICIAL LANGUAGES

English, Italian.



REGISTRATION FEES

- € 300 (22% VAT included)
- Reduced fee for undergraduate student (subject to availability): € 150 (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:

<http://noemacongressi.onlinecongressi.it/InternationalForumRescueDifficultEnvironment2025>

or write an email to info@noemacongressi.it

FACULTY

Alessandro Alcibiade	Tommaso Giacon	Andrea Panzeri
Alessandro Bacuzzi	Guido Giardini	Marcelo Parada
Steen Kroyer Barnung	Les Gordon	Gianfranco Parati
Cristiano Belfiore	Angelo Gratarola	Lorenza Pratali
Luca Berardi	Stefano Gualandris	Marco Prisco
Simona Berteletti	Peter Habeler	George Rodway
Loredana Bessone	Peter Hackett	Nicola Rotolo
Elena Giovanna Bignami	Tamas Haidegger	Steve Roy
Grzegorz Billo	Mark Hannaford	Patrizio Rubcich
Mattia Bixio	Frank Hartig	Katie Russell
Gerardo Bosco	Wade Hawkins	Giovanni Sabatino
Hermann Brugger	Urs Hefti	Francesco Sauro
Michele Burlando	Sharon Henry	Gianluca Savoca
Roberto Canese	Natalie Holzl	Tom Scalea
Giulio Carcano	Chris Imray	Federico Semeraro
Luca Carenzo	Matthias Jacob	Sven Christjar Skaiaa
Osvaldo Chiara	Marc Kaufmann	Maria Rosaria Squeo
Francesca Cialdai	Andrew Kirkpatrick	Niccolò Stomeo
Barbara Codo	Axel Krieger	Giacomo Strapazzon
Annalisa Cogo	Marco Lastilla	Pascal Strappazzon
Davide Colombo	Mijel Lotfi	Guenther Sumann
Paolo Comune	Massimo Lombardo	Marco Tartaglione
Carlo Coniglio	Andrew Luks	Michael Tipton
Claudia Dallari	Darryl Macias	Andrea Tomaselli
Francesco Daminelli	Enrico Macrì	Iztok Tomazin
Andrea De Bellis	Alberto Mantovani	Luca Tortorolo
Belinda De Simone	Alessandro Marroni	Sylvain Tosetti
Matteo Della Bordella	Fabrizio Masella	Alessandro Tuveri
Valeria Di Muzio	Kyle McLaughlin	Valerio Tuveri
Marika Falla	Hubert Messner	Francesca Verginella
Stephen Fenton	Mario Milani	Vittore Verratti
Guido Ferretti	Silvio Mondinelli	Leonardo Viamonte
Luigi Festi	Monica Monici	Giovanni Vinetti
Jean Pierre Fosson	Andrea Moscatelli	Stein Bastian von Tagen-Jordan
Paolo Frisoni	Simon Murray	Beat Walpoth
Orosz Gábor	Martin Musi	Michael Wanscher
Lorenzo Gamberini	Marie Nordgreen	Dave Weber
Hannes Gatterer	Johnny Olofsson	Sebastian Wiberg
Alessandro Geddo	Peter Paal	Jason Williams
Federico Ghio	Desiree Pantalone	Andrea Wolfler

** = Faculty subject to change*

OPENING

13:30	14:30	Registration	
14:30	15:00	Greetings from the authorities	
15:00	15:30	Lectio Magistralis: Impact of Environmental Factors on the Cardiovascular System	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
How to manage blood pressure and cardiovascular problems at altitude		G. Billo

18:00	21.00	Welcome	
		Between Mountains and Medicine: the Challenge of the Extreme	A. Mantovani, M. Della Bordella, S. Mondinelli

08:30	09.00	Lectio Magistralis: Immunity, Inflammation and Cancer; Training the Immune System	A. Mantovani
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MOUNTAINS: OLD AND NEW CHALLENGES WITH NEW VISITORS AND CLIMATE CHANGE

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



Each lecture: 20 min

Oxygen at high altitude: from the past to the future	P. Hackett
The pioneers of high-altitude sickness: a masterful story	A. Cogo
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. Strapazzon
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
Diving and Hyperbaric Medicine: 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*
terraXcube: where extreme conditions are controlled	G. Vinetti
Fly! Challenges of disability in space	A. Alcibiade
The new frontiers of surgery in space missions: exosome and more	D. Pantalone
Submarine environment and similitude with space environment condition	M. Monici
From altitude to space: aeronautical legacy and the future of extreme rescue	V. Di Muzio
Autonomous Robotic Surgery: Science Fiction or Reality?	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 – ESA and ASI Projects	F. Cialdai
Trauma care in space: how far the robotic and AI solutions?	T. Haidegger
Extreme Medicine: a global perspective	M. Hannaford



Day 21/03/2025

08.30	09.00	Lectio Magistralis: “Beyond the Limits – Mountain Medicine Pushing the Extreme”	H. Brugger
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SEA RESCUE: EXPERIENCES FROM ALL OVER THE WORLD

Chairpersons: A. Gratarola, S. Gualandris



Each lecture: 15 min

Sinistre in submarine rescue	Italian Navy
Hemorrhagic shock management in the context of special forces operations	Italian Navy
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	S. K. Barnung
Sea Italian Coast-Guard: Organization of SAR	TBD
Lake Italian Coast-Guard: Organization of SAR	TBD
Advanced medical rescue beyond siphon and underwater evacuation	A. Tuveri/V. Tuveri

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/ locoregional anaesthesia in the austere environment	S. Tosetti
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	F. Masella/R. Canese
Bavarian mountain rescue service	M. Jacob
Mountain rescue: the Italian Army's experience	TBD

13:00	14:00	<i>Lunch</i>
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From SOS to safety: the story of an all-night rescue mission	S. Berteletti/M. Cocha
France: rescue experience in Grenoble Region	TBD
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
The survival course for the French sécurité civile hélicoptère teams	P. Strappazon
Slovenian rescue team experience	I. Tomazin
National Park service mountain rescue	D. Weber
Mountain Rescue in Sweden: Search and Rescue of missing people in extreme bad weather condition	M. Nordgreen/ J. Olofsson

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

Chairpersons: M. Kaufmann, P. Frisoni

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, L. Berardi



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
New technologies in surgery: from the operating room to the extreme environment, what future?	G. Carcano
From Haiti to the european civil protection system: new approach to organization of disaster response	D. Colombo

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

Trauma care in extreme conditions - from austere environments to the hospital	N. Holzl
Management of critically ill patients in austere environment	M. Bixio
Prehospital blood in Italy: state of the art	M. Tartaglione/ F. Daminelli
The role of prehospital ultrasound in clinical decision making in austere and remote environments	L. Gamberini
Urban environments are extreme environments	C. Belfiore
Mass Casualty Incident Management in Extreme Environments: the WSES project	B. De Simone

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, A. Ferretti



Each lecture: 20 min

Aeromedical mass evacuation: challenges in extreme environments	M. Prisco
Title: TBD	A. Panzeri
Ski Patrol	F. Ghio
Elite sporting event medical management	M.R. Squeo
World Athletics Label Marathons	L. Carenzo
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
Preparing for the Unpredictable: Foundations of Disaster Medicine for Tomorrow's Clinicians	O. Gábor

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

Chairpersons: D. Macias, M. Musi, V. Verratti



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
Wearable devices and vital signs monitoring in mountain rescue	E. G. Bignami



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
Burns: the first approach in children	A. De Bellis

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

Chairpersons: L. Festi, L. Carengo



Each lecture: 15 min

Diploma in mountain medicine and emergency medicine	J. Williams
Mountain medicine course on the Andes	M. Musi
Cognitive appraisal in high stakes environment	L. Gamberini
Simulation for elite providers	L. Carengo
Putting it all together: the master in mountain emergency medicine	C. Dallari
From CAVES to SPACE: using terrestrial analogues to train astronaut expeditionary behaviour	L. Bessone*
Canioning medicine and first aid training, an example of a safety switch	I. Soterias

Lunch

ORAL PRESENTATION SESSION



Each presentation: 05 min

14.30	15.30	SIMeM, UIAA, ICAR
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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:

