

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)



HOW TO REGISTER

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

For further information please consult:

<https://secure.onlinecongress.it/onlinecongress/secure/form.aspx?GUID=3241974227069397477259189> or write an email to info@noemacongressi.it.



UIAA



**eurac
research**



Consiglio Nazionale
delle Ricerche



IHELP

FACULTY

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

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

08:30	09.00	Lectio Magistralis: Immunity, Inflammation and Cancer; Training the Immune System	A. Mantovani
-------	-------	---	--------------

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	Coffee break
-------	-------	--------------

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	Lunch
-------	-------	-------

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: exosome and more	D. Pantalone
Submarine environment and similitude with space environment condition	M. Monici
Title: TBD	Italian Air Force
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
-------	-------	---	------------

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

11.00	11.30	<i>Coffee break</i>
-------	-------	---------------------

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	F. Masella/R. Canese
Bavarian mountain rescue service	M. Jacobs

13:00	14:00	<i>Lunch</i>
-------	-------	--------------

From SOS to safety: the story of an all-night rescue mission	S. Berteletti
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
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
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>
-------	-------	---------------------

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
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>
-------	-------	--------------

EVENT MEDICINE AND MASS GATHERING IN EXTREME ENVIRONMENT: NEW ORGANIZATIONAL AND CLINICAL APPROACH

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



Each lecture: 20 min

Title: TBD	Italian Air Force
Title: TBD	FISI (Federazione Italiana Sport Invernali)
Ski Patrol	F. Ghio
Elite sporting event medical management	M.R. Squeo
World Athletics Label Marathons	L. Careno
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>
-------	-------	---------------------

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



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. Carenzo



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. Carenzo
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*

Lunch

ORAL PRESENTATION SESSION



Each presentation: 05 min

14.30	15.30	SIMeM, UIAA, ICAR
-------	-------	-------------------

This document is constantly updated. Please find the latest version of the program and the registration opening date on our website:

