

Réunion Internationale des Laboratoires et Experts des Matériaux, systèmes de construction et ouvrages

The International Union of Laboratories and Experts in Construction Materials, Systems and Structures

# **RILEM History & Goals**



## When did everything start?



# **RILEM History & Goals**

# rilen

## Who were the founders?



Robert L'Hermite (1910-1982)

## **RILEM Founding Members**

S. BECHYNE, Czechoslovakia, J.-L. BIENFAIT, The Netherlands,

F. CAMPUS, Belgium, G. COLONNETTI, Italy,

E. L. Da FONSECA COSTA, Brazil, S. A. DELPECH, Argentina,

E. FORSLIND, Sweden, W. GLANVILLE, United Kingdom,

G. HANSEN, Denmark, R. L'HERMITE, France,

F. LEA, United Kingdom, W. OLSZAK, Poland,

M. ROCHA, Portugal, E. TORROJA, Spain,

M. ROS, Switzerland, M. P. WHITE, United States

Renew international relations & cooperation between institutions for testing and research on materials and structures

Paris, 17 - 20 June 1947 Laboratoires du Bâtiment et des Travaux Publics de Paris

# **RILEM History & Goals**



## **RILEM** goals

- favour and promote cooperation at international scale by general access to advanced knowledge,
- stimulate new directions of research and its applications, promoting excellence in construction,
- promote sustainable and safe construction, and improved performance and cost benefit for society.

# rilen

## **RILEM presidents**



**President** 

**Vice-President** 



**Past President** 



**Honorary President 2025** 

Prof. Nele De Belie Ghent University Belgium Prof. Hans Beushausen
University of Cape Town
South Africa

Dr Nicolas Roussel
Université Gustave Eiffel
Francia

Prof. Dr Hoàng Tung

HUCE

Vietnam

## **RILEM Organisation Chart**

#### **RILEM Membership**



#### **General Council**

Decision-making body of the Association

#### **Presidency**

Decides the general orientation of the Association

President
Vice President
Outgoing President
Treasurer

General Secretary (nonvoting)

#### Bureau

Control of day-to-day affairs of RILEM

President
Vice President
Honorary President
Outgoing President
Treasurer
4 members at large

#### **General Secretariat**

Executive organ of the General Council and Bureau

General Secretary
Staff (Including TAC and
EAC Secretary)

## Technical Activities Committee

Oversees all technical activities of RILEM including TCs

TAC Chair & Secretary
6 Cluster conveners
9 experts at large
Outgoing Chair
EAC Chair ex officio
MS EiC ex officio
RTL EiC Ex officio

#### Development Advisory Committee

Organizational, financial, promotional, and administrative matters

DAC Chair & Secretary
Treasurer
10 Regional Conveners
4 experts
Outgoing Chair

#### **RILEM Youth Council**

RYC Chair Vice Chair 12 members

## **Educational Activities Committee**

Educational courses such as doctoral courses and short seminars for professionals (e.g. practicing engineers).
Educational publications and other teaching material

EAC Chair & Secretary 7 members at large TAC Chair ex officio Outgoing Chair

# Editorial Board Materials and Structures

Scientific Management of M&S

Editor in Chief
Deputy Editor in Chief
TAC Chair
Former EiC
18 Associate Editors

## **Editorial Board RILEM Technical letters**

Scientific Management of RTL

Editor in Chief
Deputy Editor in Chief
10 Associate Editors



## **RILEM Memberships**

RILEM is composed of corporate members and individual members, including scientists and engineers, research and testing laboratories and companies.

#### **Corporate Members**

- INSTITUTIONAL AND INSTITUTIONAL-PLUS MEMBERS are research and testing organisations of national renown; universities, international or national standards organisations.
- INDUSTRIAL MEMBERS are large firms or associations in the materials or construction sectors.
- ASSOCIATE MEMBERS are smaller research, academic or building organisations or companies.

#### **Individual Members**

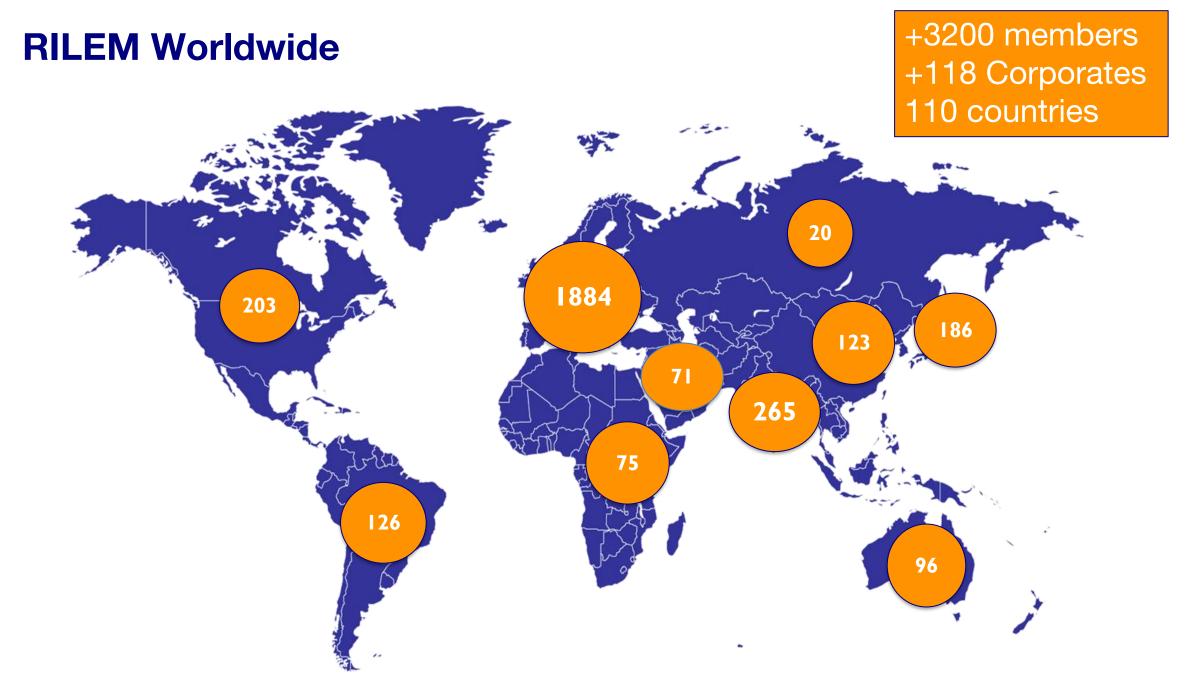
- A SENIOR MEMBER is an experienced scientist or engineer, having reached a position of responsibility and recognised
  expertise in a public or private organisation or company concerned with testing or research in the field of building
  materials and structures.
- A YOUNG MEMBER is an under-graduated student (including PhD students) or a young research scientist or engineer who is at the early stage of his career under the age of 35. Each RILEM young member is linked to the International Network of RILEM, through his registration in the Directory of Members. A RILEM young member may register to contribute to the activity of a RILEM TC.

## **RILEM Worldwide**











## **RILEM Technical Committees**







# Technical Committees (**TCs**) are the **cornerstone** of RILEM

## TC work typically results in:

- Technical Exchange
- State-of-the-art reports
- Recommendations on test methods

All TCs participants should register by filling the online "Join a TC registration form" on RILEM Website

The lifetime of a TC is between 5 and 7 years.

## **RILEM Technical Committees**



46 TCs are active in 6 Clusters, 4 Clusters pertaining to cementitious materials



Material Processing and Characterization
Prof. Susan BERNAL LOPEZ, United Kingdom



**Transport and Deterioration Mechanisms**Josee DUCHESNE, Canada



Structural Performance and Design Kei-ichi IMAMOTO, Japan



Service Life and Environmental Impact Assessment Anya VOLLPRACHT, Germany



Masonry, Timber and Cultural Heritage Arun MENON, India

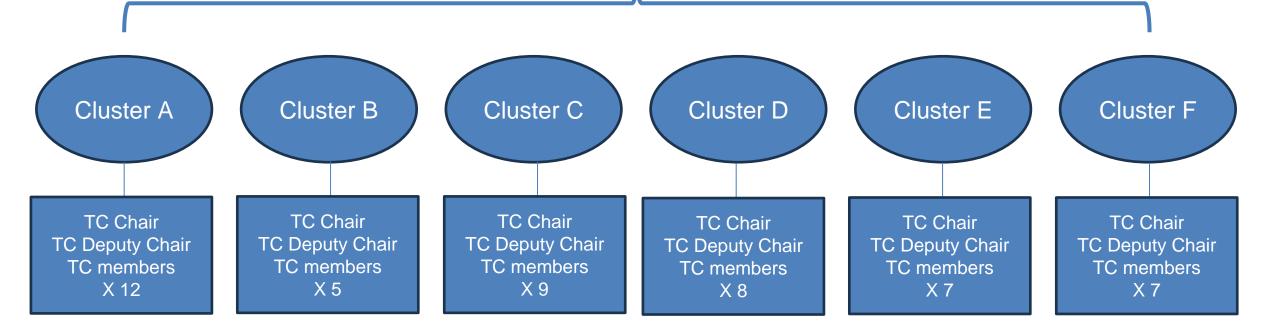


**Bituminous Materials and Polymers**Eshan DAVE, USA

# **Technical Activities Committee TAC Chair:** *Enrico SASSONI*







## **RILEM Technical Commitees**



### **Cluster A: Material Processing and Characterization**

- 1. <u>284-CEC</u>: Controlled expansion of concrete by adding MgO-based expansive agents taking the combined
- 2. 291-AMC: Use of Agro-Based Materials as Cementitious Additions in Concrete and Cement-Based Materia
- 3. 296-ECS: Assessment of electrochemical methods to study corrosion of steel in concrete
- 4. 302- CNC: Carbon-based nanomaterials for multifunctional cementitious matrices
- 5. 303-PFC: Performance requirements and testing of fresh printable cement-based materials
- 6. 304-ADC: Assessment of Additively Manufactured Concrete Materials and Structures
- 7. 305-PCC: Pumping of concrete
- 8. 309-MCP: Accelerated Mineral Carbonation for the production of construction materials
- 9. <u>311-MBC</u>: <u>Magnesia-based binders in concrete</u>
- 10.312-PHC: Performance testing of hydraulic cements
- 11.317-ACP: Active Control of Properties of Fresh and Hardening Cementitious Materials
- 12. CSA: Calcium sulfoaluminate-based cement and concrete



## **Cluster B: Transport and Deterioration Mechanisms**



New

**Sept 2024** 

- 1. 285-TMS: Test method for concrete durability under combined role of sulphate and chloride ions
- 2. <u>286-GDP: Test Methods for Gas Diffusion in Porous Media</u>
- 3. 297-DOC: Degradation of organic coating materials and its relation to concrete durability
- 4. 298-EBD: Test methods to evaluate durability of blended cement pastes against deleterious ions
- 5. 313-MMS: Modelling and experimental validation of moisture state in bulk cementitious materials

#### **Cluster C: Structural Performance and Design**

- 1. 287-CCS: Early age and long-term crack width analysis in RC Structures
- 2. 288-IEC: Impact and Explosion
- 3. 292-MCC: Mechanical Characterization and Structural design of Textile Reinforced Concrete
- 4. <u>294-MPA</u>: <u>Mechanical properties of alkali-activated concrete</u>
- 5. <u>306-CFR</u>: Concrete during Fire Reassessment of the framework
- 6. 314-OCM: On-site Corrosion Condition Assessment, Monitoring and Prediction
- 7. MBB: Mechanical behaviour of bio-aggregates based buildings materials
- 8. QPA: Quality and performance assurance of additively manufactured cementitious composites by advance
- 9. RCC: Rolled compacted concrete for pavement applications



## **Cluster D: Service Life and Environmental Impact Assessment**

- 1. <u>289-DCM</u>: Long-term durability of structural concretes in marine exposure conditions
- 2. <u>299-TES</u>: Thermal energy storage in cementitious composites
- 3. 300-ARM: Alkali-aggregate reaction mitigation
- 4. 301-ASR: Risk assessment of concrete mixture designs with alkali-silica reactive (ASR) aggregates
- 5. 315-DCS: Data-driven concrete science
- 6. CUC: Carbon dioxide uptake by concrete during and after service life
- 7. SDM: Scientific Metadata Management of Construction materials
- 8. <u>UMW : Upcycling Powder Mineral "Wastes" into Cement Matrices</u>



### **Cluster E: Masonry, Timber and Cultural Heritage**

- 1. 290-IMC: Durability of Inorganic Matrix Composites used for Strengthening of Masonry Constructions
- 2. 310-TPT: Tests methods for a reliable characterization of resistance, stiffness and deformation pro
- 3. 318-BEC: Bio-stabilised earth-based construction: performance-approach for better resilience
- 4. 319-MAE: Mechanical performance and durability assessment of earthen elements and structures
- 5. <u>320-PEM</u>: Processing of earth-based materials
- 6. CTM: Testing Methods For Masonry Cores
- 7. MCB: Mechanical Characterisation of Bamboo





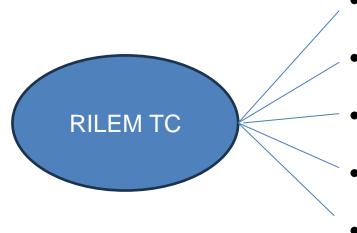
## **Cluster F: Bituminous Materials and Polymers**

- 1. 295-FBB: Fingerprinting bituminous binders using physico-chemical analysis
- 2. <u>307-PPB</u>: Physicochemical Effects of Polymers in Bitumen
- 3. 308-PAR: Performance-based Asphalt Recycling
- 4. 316-FEE: Fume Emissions Evaluation for Asphalt Materials
- 5. APD: Alternative Paving Materials Design and Performance
- 6. APS: Alternative Paving Materials Sustainability
- 7. MWP: Mechanical Wave Propagation to characterize bituminous mixtures





# Dissemination of information worldwide



- Recommendation (OA paper in MAAS)
- Proceedings (Springer or RILEM Publications)
- TC report as Paper in Topical Collection of MAAS
- TC opening or finalising activities paper in RTL
- STAR state-of-the-art report, book published by Springer



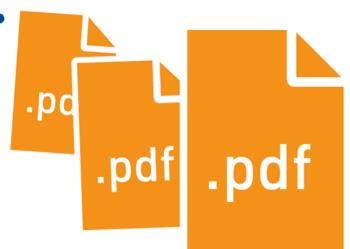








You can download all our publications for free on the RILEM website





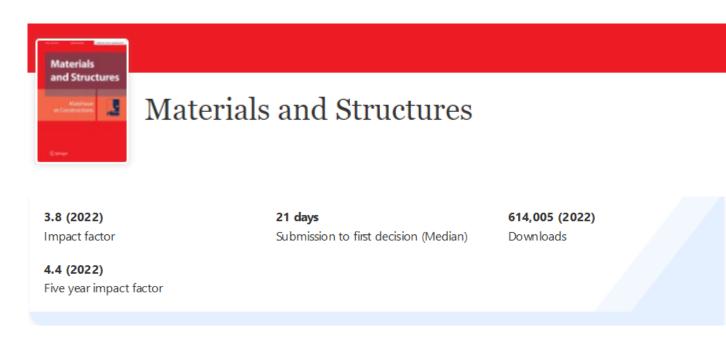


## **Materials & Structures (M&S)**

#### 50th Anniversary Issue in Open Access

Materials and Structures, the flagship publication of the International Union of Laboratories and Experts in Construction Materials, Systems and Structures (RILEM), provides a unique international and interdisciplinary forum for new research findings on the performance of construction materials. A leader in cutting-edge research, the journal is dedicated to the publication high-quality papers examining of fundamental properties of building materials, their characterization and processing techniques, modelling, standardization of test methods, and the application of research results in building and civil engineering. Structures Materials and also publishes RILEM's comprehensive reports prepared by technical committees.

## RILEM Flagship, created in 1968





## **RILEM Technical Letters (RTL)**

RILEM Technical Letters journal was launched in March 2016. With the new scientific peer review journal, RILEM Technical Letters, RILEM seeks to venture into the new era of open access publishing by disseminating contributions breaking new ground in the field of construction materials science.

Scope of the journal and profile of the publications RILEM Technical Letters publishes reports of major innovative research or strategic research needs in the field of construction and building materials science in the form of short letters available online. The letters are submitted on invitation by the Editorial Board.

## **RILEM OPEN ACCESS JOURNAL**



The journal became indexed in the Directory of Open Access Journals (DOAJ) in September 2018.

In August 2020, RILEM Technical Letters was included in Scopus database.

# **RILEM Annual and Technical reports**











## **Future RILEM Annual Weeks and Spring Conventions**

### **RILEM Annual Weeks**

- August 24 to August 29, 2025 79th Annual Week, Hanoi, Vietnam, Prof. Tuan Nguyen
- September 5 to September 12, 2026 80th Annual Week, Nairobi, Kenya, Dr Wolfram Schmidt
- o 2027 81st Annual Week, Bali, Indonesia, Prof. Puput Risdanareni



## **RILEM Spring Conventions**

- March 22 to March 28, 2025 Mendrisio, Switzerland, Prof. Christian Paglia
- April 13 to April 17, 2026 Ghent, Belgium, Prof. Nele De Belie & Prof Geert De Schutter
- o 2027 Thessaloniki, Greece, Prof. Maria Stefanidou

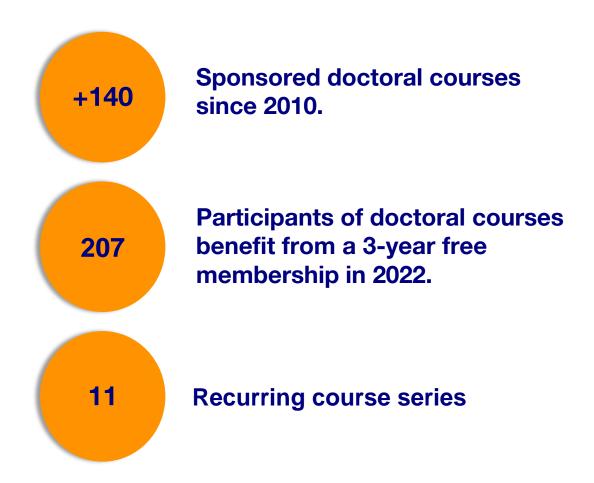


## **RILEM Educational Activities**



## **EAC**

One of the main purposes of the Educational Activities Committee (EAC) of RILEM is to broaden the education of both PhD students and the professional community through promotion of interesting and informative oneweek PhD courses and seminars on subjects of relevance to researchers working in specific areas. RILEM EAC is responsible for RILEM activities in the field of education. These include a number of different tasks, of which the basic and most important one is the courses to which we grant scientific sponsorship. Though RILEM EAC has only existed for a handful of years, our sponsored courses have been enjoyed by more than 2000 participants and about 200 teachers.



## **RILEM EAC Webinars**



- Monthly free webinar series, RILEM Online Conferences & Transfer of Knowledge (ROC&TOK), designed to give information about how to communicate and teach subjects, related to the activities of RILEM and its technical committees.
- The webinars take place online on the first Thursday of each month, except for January and August, at 2 PM UTC.
- The webinars target professors and senior PhDs and are delivered by experts. However, they are open to all interested, including students and those working in industry.
- Each webinar is scheduled with a 30-min presentation followed by a 30-min Q&A session.
- The webinars are free, i.e. no registration fees are required.
- Create your Membership or free Register user account and subscribe to our Newsletter to be kept posted!

CPD credits issued by the Institute of Concrete Technology, UK





On the first Thursday of each month, at 2pm UTC (GMT+0)



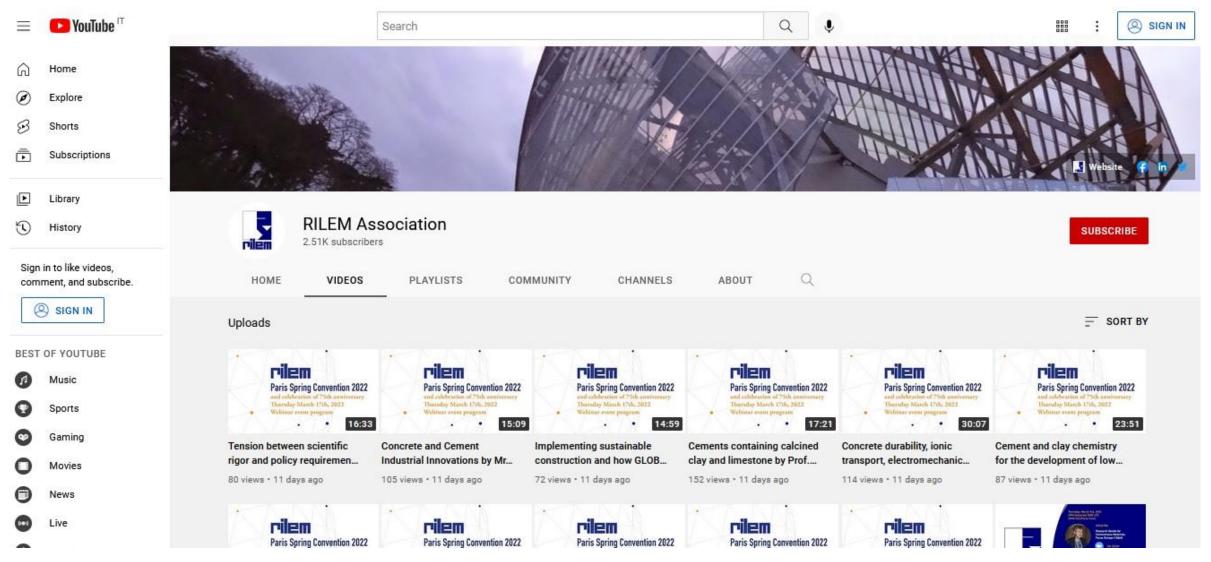
ROC&TOK Webinar series

How to communicate and teach subjects related to the activities of RILEM and its technical committees.

## RILEM YouTube channel



# www.youtube.com/user/RILEMChannel





## New standing committee: RILEM Youth Council RYC

- RILEM Tasked with attracting, involving and motivating young RILEM members
- Encourage participation in TAC and EAC activities
- Increasing awareness on RILEM events and courses
- Grooming young RILEM members for RILEM leadership positions
- Showcasing / celebrating the achievements of the RILEM Youth
- Creating networks between emerging researchers to increase visibility of / access to RILEM





## **RILEM Awards for YOUNG members**



# RILEM awards the following recognised distinctions annually

#### √ Robert L'Hermite Medalist

In 1967 when RILEM celebrated its 20th anniversary, it was decided to create a RILEM Medal which would be granted each year to a research scientist. In 1981, the Medal was renamed the Robert L'Hermite Medal, in honour of the President-Founder of RILEM. Since then, each year, the Robert L'Hermite Medal is awarded to a **researcher of less than 40 years**, who has made an exceptional scientific contribution to the field of construction materials and structures.

#### ✓ Gustavo Colonnetti Medalist

Starting in 2016, each year, up to **two Gustavo Colonnetti Medals** are awarded **to researchers of less than 35 years**, who have made an outstanding scientific contribution to the field of construction materials and structures

#### ✓ RILEM Best Student Poster Award

Implemented in 2017, the RILEM Best Student Poster Award is to be given at every RILEM Annual Week conference. The award is given at the conference to a student who has a poster and is at the conference to present/explain the work. The selection is made by a jury chosen by the RILEM Honorary President. The awardee receives a diploma/certificate from the TAC Chair at the conference.

#### ✓ RILEM PhD Grant

Implemented in 2018 for the first time, this award is given every year at the RILEM Annual Week to PhD students under the age of 35 and residing in any of the countries where a special discount RILEM membership fee is applicable.

# Dr Jose Norambuena-Contreras 2024 Robert L'Hermite Medallist







Dr Norambuena-Contreras is Associate Professor in Civil Engineering at the University of Bio-Bio (UBB) in Chile, where he leads a multidisciplinary Research Group focused on Advanced Bituminous Materials. Previously, he has held Scientific Positions at several prestigious Universities and Research Centres in Spain, Switzerland, and UK. The Robert L'Hermite medal was awarded to Dr Norambuena-Contreras in recognition of his research activity on self-healing bituminous materials for more sustainable and resilient pavement infrastructure. His internationally recognized expertise and leadership are testified by a very strong publication record, his role as Principal Investigator in several publicly and privately funded research projects and his involvement in scientific committees and evaluation panels at the national and international levels. He has also been very active within RILEM by being a member of several technical committees and part of the Latin America Group "Lat-RILEM". Considering his strong involvement in RILEM and his service to the scientific community, he has also been recently appointed as the new Regional Convener of RILEM for Latin America. Dr Norambuena-Contreras is nowadays in the process of relocating from UBB-Chile, where he worked over the last 9 years, to the United Kingdom, where he will be appointed next June as Senior Lecturer in Civil Engineering at the Faculty of Science and Engineering of Swansea University, with affiliation to the Materials & Manufacturing Research Institute.

# Dr Rob Wolfs 2024 Gustavo Colonnetti Medallist







Dr Rob Wolfs is currently an Assistant Professor in the Built Environment department of the Eindhoven University of Technology (TU/e), Netherlands. His research mainly aims to develop novel digital technologies to design structures with higher efficiency and lower environmental impact. After obtaining his PhD at TU/e, he spent visiting periods in France and Denmark, which helped him develop a strong international network of collaborations, which include research groups and industrial stakeholders. In light of his expertise in robotics for construction and large-scale 3D printing, documented by several highly cited publications, he has been invited to join the scientific committee of international conferences and to give numerous invited talks and keynote talks in Europe, Asia, Africa, and the USA. Dr. Wolfs also has a strong record of supervision and mentoring of undergraduate and graduate students and has been invited to communicate his research to the general public through news articles, TV, and radio programs. Dr. Wolfs has also been very active in RILEM by taking part in several technical committees and contributing to state-of-the-art reports and review papers on concrete 3D printing and related digital fabrication technologies.

## Dr Zhenming Li 2024 Gustavo Colonnetti Medallist







Dr Zhenming Li has been a Marie Skłodowska-Curie Postdoctoral Fellow at the University of Sheffield, UK, after receiving his PhD and working for years as a postdoc in Delft University of Technology, the Netherlands. He will be working in Harbin Institute of Technology (Shenzhen) as Professor from 2024. His research activity mainly focuses on understanding, predicting and mitigating the autogenous shrinkage of alkali-activated materials by combining sophisticated experiments and numerical modeling. The impact of his research is documented by the high number of citations received by his numerous high-quality publications, as well as by the fact that he has been invited to give lectures at several international events. His involvement in RILEM includes his participation in several technical committees, for one of which he also serves as executive secretary, and his activity as a lecturer within a doctoral course organized during an annual RILEM week.

## **RILEM celebrity endorsement**





"It is like for a young player to have had the opportunity to play with Pelé, Maradona or nowadays with Messi"

Robert Torrent, Materials Advanced Services Ltd.

**2016 RILEM Honorary Member** 

## **RILEM industry endorsement**





Dr. Fragkoulis Kanavaris, ARUP London, UK Deputy Chair of RILEM TC 287-CCS: Early age and long-term crack width analysis in RC Structures "... industry companies and firms are very much project and income driven. RILEM is based on voluntary contributions from selfmotivated members. This does not bring any profit to a firm but it does bring prestige, credibility and knowledge. Now... there are firms that appreciate that and there are firms that do not"



































**ARUP** 









































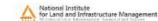




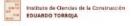






































































Braunschweig



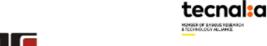
































































































UNNOBA Universidad Nacional del Neroeste de la Provincia de Buenos Aires





## **RILEM Partnerships**

























































# **RILEM Supports Globe!**



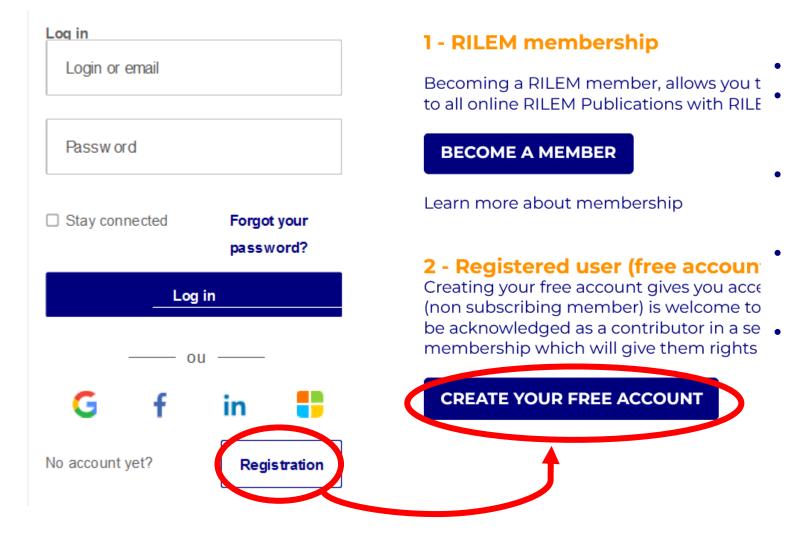
objective of the Global Consensus on Sustainability in the Built Environment - GLOBE - is to direct the attention of the global community, politicians, industry leaders, and societal decisionmakers to the critical importance of the built environment for sustainable development at global and local scales. To learn more about the consensus, please visit Globe page.



SUPPORT: http://globe-consensus.com/

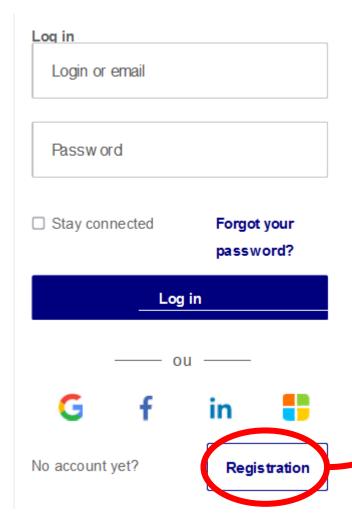


## Registered Users



- It is free
- It gives access to the electronic version of the Proceedings published by RILEM Publications
- It gives access to the electronic version of the unedited versions of the RILEM STARs
- It gives access to other publications available on the website, i.e. reports, recommendations and compendiums
- It allows participation to TC meetings, but without the possibility to be listed as a TC member nor as an author on the TC outputs.

## RILEM Subscribing Members



#### 1 - RILEM membership

Becoming a RILEM member, allows you to all online RILEM Publications with RILL

#### **BECOME A MEMBER**

Learn more about membership

#### 2 - Registered user (free accoun

Creating your free account gives you acc (non subscribing member) is welcome to be acknowledged as a contributor in a semembership which will give them rights

CREATE YOUR FREE ACCOUNT

- Same benefits of registered users
- Membership in a RILEM Technical Committee. A RILEM member who actively contributes to the TC outputs (articles, STARs, etc.) will be listed as a TC member and author on the TC outputs
- Personal access to the documents produced by a RILEM Technical Committee of which you are member
- Access to electronic version of all RILEM Proceedings, published by RILEM Publications and Springer
- Free subscription to the online version of *Materials and Structures* journal (archives, current volumes)
- Reduced fees for RILEM events (in general 10%, subject to decision of local organisers)
- 20% discount on all SPRINGER ebooks
- Much more...



### Become a RILEM member!

➤ Individual fees in 2024

Young Member: 27 euros

Senior Member: 395 euros

Retired Member: 80 euros

Young Member is an under-graduated student (including PhD students) or a young research scientist or engineer who is at the early stage of his career <u>under the age of 35</u>

- Corporate fees in 2024
  - Associate Member: 1340 euros (3 staff members and one associate contact)
  - Institutional Member: 2540 euros (15 staff members older than 35 + unlimited staff members under the age of 35)
  - Institutional-Plus Member: 4660 euros (unlimited staff members)
  - Industrial Member: 4660 euros (unlimited staff members)

A special discount (from 40% to 90%) is applicable for countries according to their GDP per capita. More information at <a href="https://www.rilem.net/membership">https://www.rilem.net/membership</a>

## **Contact us**



## **Secretariat General**

#### **RILEM**

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Subscribe to RILEM's social media channels on LinkedIn, Facebook, Twitter and YouTube to stay abreast on what's happening at RILEM!











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Ms. Aurelie MARTINGALE



Head of Publications and Communication
Ms. Anne GRIFFOIN



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