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
Table of Contents

- RILEM History & Goals
- RILEM Organisation
  - Membership
  - Presidents
  - Organizational Chart
- Events: Annual weeks and Spring meetings
- Educational Activities
- Technical committees (TCs)
- Publications
  - Recommendations
  - Reports
  - Proceedings
  - Journals
    - Materials and Structures (M&S)
    - RILEM Technical Letters (RTL)
    - Annual & Technical reports
- Awards and Honors
- RILEM Partnerships
- RILEM Corporate members
- GLOBE
RILEM History & Goals

When did everything start?

1947 Paris
RILEM History & Goals

Who were the founders?

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.
RILEM organisation

RILEM Memberships

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

**Corporate Members**

- **INSTITUTIONAL 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** (previously Student and Affiliate categories) 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.
“… industry companies and firms are very much project and income driven. RILEM is based on voluntary contributions from self-motivated members. This does not bring any profit to a firm but it does bring prestige, credibility and knowledge.”

Dr Fragkoulis Kanavaris, ARUP London, UK, Deputy Chair of RILEM TC 287-CCS: Early age and long-term crack width analysis in RC Structures.

Full interview available here

RILEM values the input of industry practitioners and professionals. Become a RILEM member and join a RILEM Technical Committee! Bring Prestige, Credibility and Knowledge to your company!
RILEM organisation

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 organisation

RILEM Subscribing Members

• 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 e-books

• Much more…
RILEM organisation

Some rules about membership and authorship

Are you a RILEM member?
- Yes
- I don’t know
- No

Is your institution a Corporate member?
- Yes
- No

You can become a member of any RILEM TC, even if you have no previous knowledge on the topic

Do you actively contribute to the TC outputs (articles, STAR, etc.)?
- Yes
- No

You will be:
- Not listed as a TC member nor as an author on the TC outputs
- Possibly acknowledged as a contributor in a separate list, different from that of the TC members, on those outputs where you actively contributed

You will be:
- Listed as an author on the TC outputs
- Possibly acknowledged as a contributor in a separate list, different from that of the TC members, on those outputs where you actively contributed

You will be:
- Listed as a TC member on the TC outputs
- Listed as an author on the website during the life of the TC, but deleted from the list at the end of the TC life

Active contribution = to take part in the TC meetings and contribute to the technical/scientific discussion and preparation of the TC documents

You need help, contact us: assistant@rilem.org
RILEM organisation

Become a RILEM member!

- Individual fees in 2023
  - Young Member: 25 euros
  - Senior Member: 375 euros
  - Retired Member: 75 euros

- Corporate fees in 2023
  - Institutional Member (with unlimited staff members): 2205 euros
  - Industrial Member (with unlimited staff members): 4050 euros
  - Associate Member (with 3 staff members and one associate contact): 1165 euros

A special discount fee (from 40% to 60%) is applicable for countries according to their GDP per capita.

More information at https://www.rilem.net/article/membership-32
RILEM organisation

RILEM benefits and values for YOUNG MEMBERS

- access to international forum of experts through seminars and workshops
- access to international expertise and opportunities to acquire and advance leading-edge technology through dedicated committee work
- reduced fees on events and printed publications

Worldwide network

Interact with leading scientists and technologists

Many active technical committees

State of the art activities
RILEM organisation

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 Worldwide

+2880 members
+116 Corporates
110 countries
RILEM organisation

RILEM presidents

President
Dr. Nicolas Roussel
*Université Gustave Eiffel*
FRANCE

Vice-President
Dr. Nele De Belie
*Gent Univ.*
BELGIUM

Past President
Dr. Ravindra Gettu,
*IIT Madras*
INDIA

Honorary President 2022
Prof. Takafumi NOGUCHI
*University of Tokyo*
JAPAN
Future RILEM Annual Weeks and Spring Conventions

RILEM Annual Weeks

- 2022 - 5 Sept. - 9 Sept.: 76th Annual Week, Kyoto, Japan, Prof. Takafumi Noguchi
- 2023 - 4 Sept. - 8 Sept.: 77th Annual Week, Vancouver, Canada, Prof. Nemy Banthia
- 2024 - 78th Annual Week, Toulouse, France, Prof. Alexandra Bertron
- 2025 - 79th Annual Week, Hanoi, Vietnam, Prof. Tuan Nguyen Vanand
- 2026 - 80th Annual Week, Nairobi, Kenya, Dr. Wolfram Schmidt

RILEM Spring Conventions

- 2023 – 6 March – 10 March: Rabat, Morocco, Dr. Prof. Mohammed Sonebi
- 2024 Milano, Italy, Dr. Liberato Ferrara
- 2025: Mendrisio, Switzerland, Dr. Paglia Christian
- 2026: Ghent, Belgium, Prof. Nele De Belie

New call was launched for 2027 Annual week and Spring meeting
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 one-week 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.

**Sponsored doctoral courses since 2010.**

**Participants of doctoral courses benefit from a 3-year free membership in 2022.**

**Recurring course series**

- 8
- 240
- +130
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!

NEW

CPD credits issued by the Institute of Concrete Technology, UK
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

Around 40 TCs are active in 6 Clusters 4 Clusters pertaining to cementitious materials

**Material Processing and Characterization**
Daman PANESAR, Canada

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

**Structural Performance and Design**
Giovanni PLIZZARI, Italy

**Service Life and Environmental Impact Assessment**
Anya VOLLPRACHT, Germany

**Masonry, Timber and Cultural Heritage**
Arun MENON, India

**Bituminous Materials and Polymers**
Eshan DAVE, USA
Cluster A: Material Processing and Characterization

• 266-MRP : Measuring Rheological Properties of Cement-based Materials
• 275-HDB : Hygrothermal behaviour and Durability of Bio-aggregate based building materials
• 282-CCL : Calcined Clays as Supplementary Cementitious Materials
• 284-CEC : Controlled expansion of concrete by adding MgO-based expansive agents taking the combined influence of composition and size of concrete elements into consideration
• 291-AMC : Use of Agro-Based Materials as Cementitious Additions in Concrete and Cement-Based Materials
• ADC : Assessment of Additively Manufactured Concrete Materials and Structures
• CNC : Carbon-based nanomaterials for multifunctional cementitious matrices
• 296-ECS : Assessment of electrochemical methods to study corrosion of steel in concrete
• PCC : Pumping of concrete
• PFC : Performance requirements and testing of fresh printable cement-based materials
• MCP : Accelerated Mineral Carbonation for the production of construction materials
• MBC : Magnesia-based binders in concrete
Cluster B: Transport and Deterioration Mechanisms
• 281-CCC: Carbonation of concrete with supplementary cementitious materials
• 283-CAM: Chloride transport in alkali-activated materials
• 285-TMS: Test method for concrete durability under combined role of sulphate and chloride ions
• 286-GDP: Test Methods for Gas Diffusion in Porous Media
• 297-DOC: Degradation of organic coating materials and its relation to concrete durability
• 298-EBD: Methods Test methods to evaluate durability of blended cement pastes against deleterious ions
to evaluate durability of blended cement pastes against deleterious ions
• FTC: Durability and Service Life of Concrete under the Influence of Freeze-Thaw Cycles combined with
Chloride Penetration
• MMS: Modelling and experimental validation of moisture state in bulk cementitious materials and at the
steel-concrete interface

Cluster C: Structural Performance and Design
• 269-IAM: Damage Assessment in Consideration of Repair/ Retrofit-Recovery in Concrete and Masonry
Structures by Means of Innovative NDT
• 287-CCS: Early age and long-term crack width analysis in RC Structures
• 288-IEC: Impact and Explosion
• 292-MCC: Mechanical Characterization and Structural design of Textile Reinforced Concrete
• 294-MPA: Mechanical properties of alkali-activated concrete
• CFR: Concrete during Fire-Reassessment of the framework
• OCM: On-site Corrosion Condition Assessment, Monitoring and Prediction
Cluster D: Service Life and Environmental Impact Assessment

- **289-DCM**: Long-term durability of structural concretes in marine exposure conditions
- **293-CCH**: Stress Corrosion Cracking and Hydrogen Embrittlement of Concrete-Reinforcing Steels
- **300-ARM**: Alkali-aggregate reaction mitigation
- **302-ASR**: Risk assessment of concrete mixture designs with alkali-silica reactive (ASR) aggregates
- **299-TES**: Thermal energy storage in cementitious composites
- **DCS**: Data-driven concrete science
- **UMW**: Upcycling Powder Mineral “Wastes” into Cement Matrices

Cluster E: Masonry, Timber and Cultural Heritage

- **271-ASC**: Accelerated laboratory test for the assessment of the durability of materials with respect to salt crystallization
- **277-LHS**: Specifications for testing and evaluation of lime-based repair materials for historic Structures
- **290-IMC**: Durability of Inorganic Matrix Composites used for Strengthening of Masonry Constructions
- **TPT**: Tests methods for a reliable characterization of resistance, stiffness and deformation properties of timber joints
- **PEM**: Processing of earth-based materials
- **MAE**: Mechanical performance and durability assessment of earthen elements and structures
- **BEC**: Bio-stabilised earth-based construction: performance-approach for better resilience
Cluster F: Bituminous Materials and Polymers

• 278-CHA : Crack-Healing of Asphalt Pavement Materials
• 279-WMR : Valorisation of Waste and Secondary Materials for Roads
• 280-CBE : Multiphase characterisation of cold bitumen emulsion materials
• 295-FBB : Fingerprinting bituminous binders using physico-chemical analysis
• FEE : Fume Emissions Evaluation for Asphalt Materials
• PPB : Physicochemical effects of polymers in bitumen
• PAR - Performance-based Asphalt Recycling

new
RILEM Publications

Dissemination of information worldwide

- Website
- Reports
- Recommendations
- Proceedings

Technical Activities Committee
TAC Chair: Enrico SASSONI
You can download all our publications for free on the RILEM website.
RILEM Publications

State-of-the-Art reports

- Testing and characterisation of earth-based building materials and elements - State-of-the-Art Report of the RILEM Technical Committee 274-TCE; Edited by Antonin Fabbri, Jean-Claude Morel
- Digital fabrication with cement-based materials - State-of-the-art report of the RILEM Technical Committee 276-DFC; Edited by Nicolas Roussel, Dirk Lowke

- Benchmarking Chloride Ingress Models on Real-life Case Studies—Marine Submerged and Road Sprayed Concrete Structures - State-of-the-Art Report of the RILEM TC 270-CIM; Edited by E. Koenders, K. Imamoto and A. Soive
RILEM Publications

Proceedings

Published by RILEM Publications:
• PRO 134 3rd ACF/HNU International Conference on UHPC Materials and Structures - UHPC’2020, Edited by Caijun Shi & Jiaping Liu

Published by Springer:
• ISBM Lyon 2020 - RILEM International Symposium on Bituminous Materials, 14-16 December 2020, Lyon, France - Published in October 2021.
• BEFIB 2021 - Fibre Reinforced Concrete: Improvements and Innovations II - X RILEM-fib International Symposium on Fibre Reinforced Concrete, 20-22 September 2021, Valencia, Spain - Published in October 2021.

• More here!

Recommendations

• Recommendation of RILEM TC 264-RAP on the evaluation of asphalt recycling agents for hot mix asphalt, January 2022
• RILEM Standard: testing methods for determination of the double-K criterion for crack propagation in concrete using wedge-splitting tests and three-point bending beam tests, recommendation of RILEM TC 265-TDK, December 2021
• Recommendation of RILEM TC 258-AAA: RILEM AAR-0 outline guide to the use of RILEM methods in the assessment of the alkali-reactivity potential of concrete, October 2021
• Recommendation of RILEM TC 258-AAA: RILEM AAR-8: determination of potential releasable alkalis by aggregates in concrete, October 2021
• Recommendation of RILEM TC 258-AAA: RILEM AAR-10: determination of binder combinations for non-reactive mix design using concrete prisms?38 °C test method, October 2021
• Recommendation of RILEM TC 258-AAA: RILEM AAR-11: determination of binder combinations for non-reactive mix design or the resistance to alkali-silica reaction of concrete mixes using concrete prisms? 60 °C test method, October 2021
• Recommendation of RILEM TC 258-AAA: RILEM AAR-12: determination of binder combinations for non-reactive mix design or the resistance to alkali-silica reaction of concrete mixes using concrete prisms? 60 °C test method with alkali supply, October 2021
• Recommendation of RILEM TC 258-AAA: RILEM AAR-13: application of alkali-wrapping for concrete prism testing to assess the expansion potential of alkali-silica reaction, October 2021
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 of high-quality papers examining the 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.

Materials and Structures also publishes comprehensive reports prepared by RILEM’s technical committees.
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.


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

Regional Groups & National Groups

International Partnerships

2021
Annual Report

RILEM 2021 Advanced Materials, Structures and Technologies for the Built Environment

2022 Technical Report
RILEM YouTube channel
www.youtube.com/user/RILEMChannel
RILEM Strategic Actions

- Young people
- Link with industry
- OA Publication strategy
- RILEM website
- RILEM promotion and follow up
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.
After being awarded her PhD in Cali (Colombia) and working in Denmark, Australia and UK, Prof. Bernal Lopez is currently Full Professor in Structural Materials at the University of Leeds (UK), where she is Director of the Materials & Structures Group. The Robert L'Hermite medal has been awarded to Prof. Bernal Lopez in recognition of the impact of her research activity on assessment and improvement of durability and sustainability of novel cements and concretes, as well as waste management and valorisation. The importance and the influence of her research activity on these topics is testified by the numerous highly cited scientific publications that she has published as lead author. An extensive portfolio of research grants, funded at the national and international level and sponsored by industry, further proves her leadership in this field. She has been very active in RILEM, participating in 8 TCs and serving as Deputy-Chair of one of them, as well as being Associate Editor of RILEM Technical Letters since 2016. She was awarded one of the RILEM Gustavo Colonnetti medals 2016 for her previous work on alkali activated materials.
One of the 2022 Gustavo Colonnetti medals has been awarded to Dr. Ellina Bernard, who is currently a visiting postdoctoral researcher at Imperial College London (UK). Her research focus is on cement and clay chemistry for the development of low embodied CO$_2$ binders and their durability, addressed by thermodynamic modelling and experimental activity also by sophisticated techniques. Thanks to her PhD at EMPA (Switzerland) and Université de Bourgogne-Franche-Comté (France), postdoctoral appointments at the University of Bern Switzerland and in UK, and internship periods in industry, she has developed a significant international experience. Such experience has earned her awards for her research activity and has allowed her to secure two prestigious grants to continue her research, which has led to a very promising publication record. She has also been active as a member of scientific societies, peer reviewer for international journals, and organizers of scientific meetings.
One of the 2022 Gustavo Colonnetti medals has been awarded to Prof. Qing-feng Liu. After receiving his PhD in Civil Engineering in the UK, Qing-feng Liu is now Associate Professor in Civil Engineering at the Shanghai Jiao Tong University (China), where he leads the “Sustainability and Durability of concrete Materials and Structures” group and serves as Deputy Head of the Department of Civil Engineering. His research on concrete durability, especially ionic transport, electrochemical rehabilitation and service life prediction, has earned him international visibility, as demonstrated by the high number and high quality of his scientific publications, the invited talks he has given and his activity as peer reviewer and member of the editorial boards of scientific journals. He is involved in several national and international scientific societies and he has given significant contributions to many RILEM TCs, which has brought him to establish fruitful collaborations with renowned international experts. His maturity and independence have allowed him to secure impressive funding as Principal Investigator to carry out his research. He has also been very active in supervising postdoctoral researchers, PhD candidates and undergraduate students.
RILEM Honorary Members

Dr Peter RICHNER
EMPA, Switzerland

Prof. Konstantin KOVLER
NBRI, Israel

Prof. Robert Douglas HOOTON
University Toronto, Canada

Mrs Pascale DUCORNET
RILEM, France
RILEM Fellow Members

Prof. P.A. Muhammed BASHEER
University of Leeds, United Kingdom

Dr Barbara LOTHENBACH
EMPA, Switzerland

Dr Wolfram SCHMIDT
BAM, Germany
“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
“... industry companies and firms are very much project and income driven. RILEM is based on voluntary contributions from self-motivated 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”
RILEM Partnerships
RILEM Corporate Members
The 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 decision-makers 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 or the Dec 2021 press release.
Contact us

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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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