Paris Spring Convention 2022

and celebration of 75th anniversary

Thursday March 17th, 2022

Webinar event program

CONTENT

TIMELINE

9h30-9h45	WELCOME SPEECH, by Dr. Nicolas Roussel, RILEM President
9h45-12h10	1. RILEM MAIN TRADITIONAL SUBJECTS, Construction materials & research, chaired by Prof. Hans D. Beushausen, DAC chair
5 mn	Introduction by Prof. Hans D. Beushausen
20 mn	Prof.Daman Panesar
20 mn	Dr. Gabriele Tebaldi
20 mn	Dr. Antonin Fabbri
10h50-11h10	COFFEE BREAK
20 mn	Prof. Kefei Li
20 mn	Prof. Dr.-Ing. Viktor Mechtcherine
20 mn	Prof. Ioanna Papayianni
12h10-13h30	LUNCH BREAK
13h30 - 14h30	AWARDS ceremony, chaired by Prof. Enrico Sassoni, TAC Chair
10 mn	Introduction by Prof. Enrico Sassoni
	2022 COLONNETTI MEDALISTS' PRESENTATIONS
25 mn	Dr. Ellina Bernard
25 mn	Prof. Qing-feng Liu
14h30 - 15h55	2. SUSTAINABILITY & FUTURE OF CONSTRUCTION, chaired by Prof. Karen Scrivener, EAC chair
5 mn	Introduction by Prof. Karen Scrivener
20 mn	Prof. José Fernando Martirena-Hernandez
20 mn	Dr. Dipl.-Ing Wolfram Schmidt
20 mn	Mr. Christophe Levy
20 mn	Prof. Guillaume Habert
15h55-16h15	COFFEE BREAK
16h15-17h30	3. STRATEGY & PERSPECTIVE OF RILEM, panel discussion moderated by Dr. Daniela Ciancio, RILEM Implementation Manager
	Dr. Nicolas Roussel, Prof. Nele De Belie, Prof. Hans D. Beushausen, Prof. Enrico Sassoni, Prof. Karen Scrivener, Miss Joanitta Ndawula, Prof. John Provis, Dr. Alexandra Bertron
17h30-18h00	CONCLUSION, by Dr. Ravindra Gettu, RILEM Past President

DETAILED PROGRAM

• A Keynote presentations

1. RILEM Main Traditional Subjects, Construction materials & research,

chaired by Prof. Hans D. Beushausen, DAC chair

Prof. Hans D. Beushausen

Hans Beushausen is a Professor of Structural Engineering and Materials, and Director of the Concrete Materials and Structural Integrity Research Unit at the University of Cape Town. He obtained his MSc (2000) and PhD (2005) from the University of Cape Town after having finished his first degree in Structural Engineering at the University of Applied Sciences in Hamburg, Germany. His research interests encompass the fields of concrete materials, durability and service life design of structures, as well as concrete repair technology. He has been an active RILEM member since 2003 and Chair of the RILEM Development Activities Committee (DAC) since 2020.

Prof. Daman K. Panesar

Daman K. Panesar, Ph.D (McMaster University, Canada), P.Eng. is a Professor with the Department of Civil and Mineral Engineering, University of Toronto, Canada. Her research activities are focused on the sustainability and durability of cement-based construction materials and structures. The application of her research is applied to underground, nuclear, transportation and building structures and infrastructure. Prior to academia, her industrial experience focused on construction, commissioning, evaluation, repair and plant life management of power reactors. She occupies leadership positions on several national and international committees including Canadian Standards Association; International Association Structural Mechanics in Reactor Technology; India-Canada Centre for Innovative Multidisciplinary Partnerships; and RILEM. She serves on the editorial board for Cement and Concrete Composites, Canadian Journal of Civil Engineering and RILEM Technical Letters.

- **ABSTRACT TITLE:**

Concrete Durability Performance from Material to Structures

When highlighting the salient aspects of a research program focused on investigating the behavior of reinforced concrete affected by alkali silica reaction (ASR), the primary aim is to elucidate the effects of restraint, confinement and stress, due to the presence of steel reinforcement, on the behavior of concrete. The evolution of concrete expansion, cracking, mechanical properties and bond, due to ASR, are discussed in context with the influence of reinforcement type and configuration. Outcomes from this research are anticipated to impact: the advancement of numerical models used to estimate the long-term performance of ASR- affected structures by incorporating multiaxial expansion-stress relationships; and the ability for greater accuracy in condition assessment and interpretation of the status of existing ASR- affected structures by integrating knowledge of the implications of stress state on in-situ testing.

Dr. Gabriele Tebaldi

Dr. Gabriele Tebaldi, Ph.D. in Road, Railways and Airport Building, (Università Politecnica delle Marche) is an Associate Professor in Construction of Road, Railways and Airport (ICAR04) at Department of Engineering and Architecture (previously Department of Civil and Environmental Engineering & Architecture) of University of Parma since March 2015. He was awarded the National Scientific Qualification for Full Professor Position in November 2017.
He is the Adjunct Professor (Graduate Faculty) at Engineering School for Sustainable Infrastructures and Environment of University of Florida in force of a Cooperative Agreement between Department of Civil and Environmental Engineering & Architecture of University of Parma and Engineering School for Sustainable Infrastructures and Environment of University of Florida, since 2012.
Dr. Gabriele Tebaldi is a member of RILEM Development Advisory Committee since 2021. He has been an active participant of various TCs and he has been very active in RILEM as Associated Editor of Materials and Structures.
He is also the Vice Chairman of EATA – European Association of Asphalt Technologists, and Member of the Steering Committee, since 2011, and Editor in Chief of Road Materials and Pavement Design of Roads, Railways and Airfields since January 2017

- **ABSTRACT TITLE:**

State of the art and research needs for sustainable and efficient pavements

One of the main research topics in the field of asphalt materials is sustainability: this is related to saving of natural resources on one side and with the reduction of greenhouse gas emissions and landfill disposal on the other side. However, these aspects are not isolated: they are strongly related with mechanical efficiency of the materials and their performance in pavements. The current state of the art for asphalt materials includes "cold technologies" that are able to manufacture and construct without heating of aggregates, "asphalt rejuvenators" that are able to improve the performance of the "already used bitumen" and allows the use of high amounts of reclaimed asphalt in the new mixtures. Beyond that, there are several new research needs to adopt and standardise high amounts of recycled material to achieve the conditions for new pavements to be completely built with the materials from the old ones.

Dr. Antonin Fabbri

Antonin Fabbri got his PhD in 2006 on physics and mechanics of freezing-thawing behavior of porous media at "Laboratoire Navier", after a post-doctoral position at the geology laboratory of the *"Ecole Normale Superieure"* in Paris on the supercritical carbonation of oil-well cements for CO2 geological sequestration. He was from 2007 to 2011 a project manager for the French Geological Survey (BRGM). During this period, he successfully managed numerous projects (CPER Artenay, ANR Interface, SALTCO). In 2011 he joined the ENTPE as a *"Chargé de Recherche"* (Associate Professor) and was promoted in 2020 as a *"Directeur de Recherche"* (Full Professor). Since then, he has worked on primary materials, and in particular rammed earth, adobes, and earth plasters. He was involved in numerous national and international projects about the subject. He is also the deputy chair of the RILEM technical committee TCE 274 (Testing and characterization of earth-based building materials and elements) which was launched in 2016 and which notably led to the publication of a RILEM State of the art report with contributions from over 40 international experts on earthen constructions.

- **ABSTRACT TITLE:**

Performance assessment of earthen materials

This presentation highlights how earth is currently increasing in interest as a construction material for quite evident ecological reasons since its use can significantly divide the embodied energy of dwellings. Interest is also increasing because of the large number of earth-based buildings constructed before 1948. A good understanding of the behaviour of crude earth is crucial to develop proper methodologies for their rehabilitation and maintenance.
However, the prospects of earthen materials to enter mainstream construction, and a fortiori as the main structural materials, are limited notably due to the lack of knowledge on the assessment of their behaviour.
Among the major specificities that make earth an atypical building material, there is the preponderant role played by water on its mechanical and thermal performances and its durability.
Based on this observation, the lecture will aim at presenting some ongoing research focused on the evaluation and prediction of the impact of the interactions between water molecules and the material, as well as the gaps that still need to be filled.

Prof. Kefei Li

Dr. Kefei Li works in the Civil Engineering Department of Tsinghua University as tenured Full Professor, and Principal Investigator (PI) of the research group of building materials. His research fields include the physical and mechanics of cement-based materials, the durability of concrete materials and structures and the life-cycle engineering of concrete structures. He obtained his Ph.D degrees from Tongji University (2000) and Ecole Nationale des Ponts et Chaussées, Paris (2002). He leads multiple national research projects, published 70+ SCI papers, heads the draft team of the durability standards of China (CCES01 and GB/T 50476), and serves in the editorial boards of Cement and Concrete Research, Materials and Structures and Journal of Engineering Mechanics (Part B: Nanomechanics and Micromechanics). He leads the RILEM TC 289-DCM and has been the cluster convener of TAC (Cluster D) and regional convener of China for RILEM. He is also an active member of IABSE (deputy executive member of China group), FIB (COM8) and ISO TC71/SC4.

- **ABSTRACT TITLE:**

Durability Design and Planning for Concrete Structures in HZM Project

The lecture gives a comprehensive review on the durability design and planning for concrete structures in Hong Kong-Zhuhai-Macau (HZM) sea link project, exposed in an aggressive marine environment and expected to achieve a design working life of 120 years. For this purpose, the principle and fundamentals of durability design are first introduced, including the durability limit states (DLS), the performance deterioration and the design working life. Then, a global strategy is adopted for the durability design of concrete structures against both external actions such as marine chlorides and atmospheric CO 2, and risk of internal expansion reactions. The model-based methods are adopted for the design against chlorides and CO 2, with the help of long-term exposure data. Then the durability requirements are formulated into design parameters and raw material limitations. During the construction phase, the durability assessment is performed based on collected inspection data. The maintenance planning is then established on this basis, and further interacts with the inspection and maintenance activities during service phase.

Prof. Dr.-Ing. Viktor Mechtcherine

Viktor Mechtcherine is the Director of the Institute for Construction Materials and Full Professor at the Technische Universität Dresden, Germany. He is the coordinator of the German Research Foundation (DFG) Priority Program SPP 2005, Opus Fluidum Futurum – Rheology of reactive, multiscale, multi-phase construction materials and speaker of the DFG Research Training Group GRK 2250 "Mineral-bonded composites for enhanced structural impact safety ". Prof. Mechtcherine is an Editor for the journals "Cement and Concrete Composites" as well as "Materials and Structures", Member of the ACATECH National Academy of Science and Engineering, the Science Academy of Saxony and the Russian Engineering Academy, Chair of RILEM Technical Committee ADC «Assessment of Additively Manufactured Concrete Materials and Structures» and Chair of the Working Group «Digital concrete construction by additive manufacturing» of the German Committee for Reinforced Concrete (DAfStb). He is a RILEM Fellow as well as an awardee of a Wason medal for Materials Research by American Concrete Institute (ACI) and received an Innovation Award Bauma 2016 in Munich. Prof. Mechtcherine authored more than 300 scientific papers; his H-factor is 44 according to Web-of Science.

- **ABSTRACT TITLE:**

Integrating reinforcement in digital fabrication with concrete: A classification framework

The lecture will be an overview of the existing solutions for integrating reinforcement in digital concrete technologies with particular emphasis on Additive Manufacturing with concrete, also called 3D concrete printing (3DCP). The focus is on the technological aspects. On this basis a generic classification and process description outline has been developed for reinforcement integration, which is regarded as an extension of the RILEM process classification framework for Digital Fabrication with Concrete. In many instances, the integration occurs in a separate process step prior to or after concrete shaping. This holds true for all formative digital concrete shaping processes and for many 3DCP solutions. 3DCP approaches enable, however, integration of the reinforcement during concrete shaping as part of a single step AM process in a simultaneous or contiguous manner, while placement of reinforcement is considered to be a sub-process.

Prof. Ioanna Papayianni

Emeritus Prof. Ioanna Papayianni is a professor at Aristotle University of Thessaloniki and has made an exceptional contribution to RILEM as continuously since 2005. She is participating in RILEM technical Committees RILEM TC-RHM Repair mortars for historic Masonry, RILEM TC-SGM Specifications for non -structural grouting for historic masonries and architectural surfaces, RILEM TC167-COM Characterization and damage analysis of old mortars and in RILEM TC- LHS Specifications for testing and evaluation of lime-based repair materials for historic structures. She had published various reports and papers. Additionally, she organised several workshops under RILEM umbrella.

- **ABSTRACT TITLE:**

Lime-based mortars: Past, Present and Future

Lime-based mortars consisting of lime, lime & pozzolan or lime & hydraulic component, have been used for centuries to join masonry units or to cover buildings. Their characteristics and long term performance have been adequately studied and many "secrets" of their manufacture and application have been revealed.
Nowadays, restoration of monumental structures is closely related with the values of European civilization and economy of local societies and states. To protect built heritage, repair works should be done with respect to principles of compatibility, retractability and long term resistance. In the frame of RILEM TCs, much progress has been made to test the quality of repair mortars for interventions.
According to EC strategy for environment protection, the challenge is greener and more efficient mortars. The accumulated data can be used by scientists, to develop performance based models of predicting mortars behavior on site so that the selected repair mortar is compatible, resilient, and efficient within a practical time frame. New advanced technology materials and techniques can also be tested in field for approval.

2. Sustainability & Future of Construction,

chaired by Prof. Karen Scrivener, EAC chair

Prof. Karen Scrivener

Karen Scrivener has been a Professor and Director of the Laboratory of Construction Materials in the Department of Materials of EPFL (Ecole Polytechnique Fédérale de Lausanne) for the last 20 years. She received her bachelor's degree in Materials Science from the University of Cambridge in 1979 and her PhD from Imperial College London in 1984. She is a Fellow of the UK Royal Academy of Engineering and author of over 200 journal papers.
Her research focusses on understanding the chemistry and microstructure of cement-based materials and improving their sustainability. In 2008, she came up with the idea for LC3 cement; this material has the potential to cut CO2 emissions related to cement by more than 400 million tons a year.

Prof. Dr. José Fernando Martirena-Hernandez

Prof. Dr. José Fernando Martirena-Hernandez graduated from Civil Engineering in 1983. He obtained his PhD degree in 1988, and Doctor in Sciences (Dr.Sc.) in 2004 in subjects related to construction and materials. Professor Fernando Martirena is the director of CIDEM (Centre for Research & Development of Structures and Materials) at the Universidad Central de las Villas in Cuba; and dedicates his work to develop and implement sustainable technologies for the manufacture of building materials with a strong focus on social housing, through collaboration with the Latin American Network for the Sustainable Habitat, ECOSUR. Prof. Martirena's main subject of research has been the sustainable use of cement and concrete, and in particular the use of Supplementary Cementitious Materials (SCMs), Vegetable Ashes, and calcined clays as SCMs using low grade kaolinitic clay, as one of the leaders of the LC3 project worldwide. As RILEM Senior member, he chairs the TC on Calcined Clays created in 2018. He has strong connections with the industry. The work of CIDEM and Professor Martirena has been widely recognised by the Cuban Academy of Science, the Cuban Ministry of Science and Environment and the Habitat section of the United Nations.

- **ABSTRACT TITLE:**

Cements containing calcined clay and limestone as an alternative for sustainable cement production.

The presentation highlights how the cement industry is compelled to reduce carbon emissions associated with cement manufacture. Many of the choices for low carbon cements available imply high CAPEX associated with equipment. However, the combined use of calcined clay and limestone as clinker substitute provides a low CAPEX path for the industry to reduce carbon emissions. The so-called "LC3" cement, with only 50% clinker, can meet the properties of a CEM I at all ages, and yet guarantee a better durability for concrete applications. Recent development in both ASTM and EN standards enable the use of these low clinker cements, where reduction of carbon emissions is reported within 25-40%, depending on the targeted cement for comparison. There are several choices for clay calcination, including retrofitting old clinker kilns. This presentation will address the worldwide practical implementation of the technology, with focus on technology, quality of the product and standardisation.

Dr. Dipl.-Ing Wolfram Schmidt

Dr. Wolfram Schmidt works for the department of "Safety of Structures" at BAM and oversees the rheology and admixtures laboratory with a research focus on particle-polymer-fluid interactions and innovative organic and mineral cement and concrete constituents. Furthermore, he is the Secretary of the German Rheological Society and Officer of the Development Advisory Committee and Bureau of RILEM and serves as the convenor for the sub-Saharan African region for the association. He is the founder of the Pan-African cement round robin (PACE-PTS) and initiator of the conference series "Advances in Cement and Concrete Technology in Africa" (ACCTA) and ISEE-Africa (Innovation, Science, Engineering, Education). With his colleague Kolawole Olonade (UNILAG) he received the German-African Innovation Incentive Award GAIIA.
Many of his research and educational projects are focused on the potentials for more sustainable, circular urban construction technologies using local, environmentally friendly resources in Africa. In this context, he has recently initiated the Female Academic Leadership Network for Conscious Engineering and Science towards Sustainable Urbanisation (FALCONESS).
He is also involved in a variety of activities related to sustainable constructions.

- **ABSTRACT TITLE:**

Implementing sustainable construction – challenges, pitfalls, potentials and how GLOBE can leverage

Among the players and stakeholders in the built environment, there is consensus that materials, construction, and structures have to become more environmentally friendly, energy saving, and sustainable. Policies, regulations, and instruments are being discussed or have already been taken on global and local level to support this. Nevertheless, the implementation of more sustainable actions in real life is happening too slowly. The presentation will elaborate on the challenges, identified bottlenecks but also potentials toward more accelerated processes. The GLOBE Global Consensus on Sustainability in the Built Environment can become a game changing initiative by bringing the relevant key players together and develop policy advice strategies based on science and the collective experiences of international associations such as RILEM, IABSE, FIB, CIB, ECCS, IASS, and JCSS. An introduction into the background will be given as well as the next urgent actions to be taken by GLOBE.

Mr. Christophe Levy

Christophe Levy earned a B.E. Degree in Civil Engineering from Ecole Spéciale des Travaux Publics, Paris in 1984. He worked 4 years as Quality and New Materials Engineer on landmark construction sites in Central African Republic, Algeria, and France. In 1988, he joined Lafarge (today Holcim) where he held different positions in cementitious building materials: research & development, sustainable construction, and marketing, in France, India and the USA.
With about 80 granted patents, he is passionate about inventing and developing differentiating, sustainable and pragmatic solutions based on innovative cementitious building materials for building and infrastructure markets worldwide.
As the Scientific & Quality Director of the Holcim Innovation Center based in Lyon, France, he is expanding the Holcim's Academic network to develop scientific partnerships and obtain PhD fundings with numerous universities in many countries. He is also the Chairman of the upcoming International Congress on the Chemistry of Cement (ICCC 2023 in Bangkok).
He very recently co-wrote with K. Scrivener, M. Ben Haha & P. Juilland, a RILEM Technical Letter, titled: "Why do we need research on cementitious building materials: trends, needs and stakes in the European construction sector for the coming decade".

- **ABSTRACT TITLE:**

Concrete and Cement Industrial Innovations

An industrial innovation is an invention which is produced and sold on different markets. The construction industry in terms of innovation is often considered as conservative and risk averse. However, after 35 years of worldwide observation and cementitious products development, we must acknowledge the considerable evolution in the building materials domain in terms of stakes, trends, technologies, and sciences, and hence, the recent emergence of major cement and concrete innovations at different steps of the construction value chain: architectural, environmental and structural designs; material sourcing and production; construction productivity and costs; recycling.
Thus, if we reflect on future construction technology, we can try to imagine how cementitious materials could have evolved over the next three decades, based on another set of innovations with renewed trends and levers: some based on improvements and extrapolation of today's innovations, and some on real breakthroughs.

Prof. Guillaume Habert

Guillaume Habert is the associate professor for sustainable construction at ETH Zurich. He leads a group of scientists, engineers and architects that aim to ground sustainability in the disciplines of the built environment. He is an alumnus from the Ecole Normale Supérieure in Paris and holds a PhD in structural geology. He is associate editor of international scientific journals which cover the wide span of his research activities: "Material and Structures", "Buildings and Cities" and "Sustainability". The objective of his research is to identify the relevant parameters that influence the environmental impacts of buildings at international, national and regional levels in order to implement sustainable practices throughout the development of innovative constructive techniques adapted to the technical, economic and socio-cultural situation of specific territories. This involves interdisciplinary works and draws on Life Cycle Assessment, urban metabolism and material science. More specifically, recent work focuses on the use of excavation materials to develop circular, and climate neutral building materials and the quantification of the regenerative potentials brought by an increased implementation of biobased materials in construction sector.

- **ABSTRACT TITLE:**

Tension between scientific rigor and policy requirement in life cycle assessment (LCA). Where should perfection end?

Environmental concern is now a crucial component of any material development, company strategy or political framework. Considering the impact construction activities have on climate change and resource consumption, it seems unavoidable to look at the carbon footprint and the circularity of any materials, buildings or cities that are built and demolished. Among the many ways of assessing the environmental impact of our activities, the Life Cycle Assessment (LCA) has become the accepted method to compare products before taking decisions. However, as much as LCA gained a level of acceptance as the only credible way to identify the true sustainable solutions, we can also see increased concerns about the true credibility of its results. This is this tension between global acceptance at the political, corporate, scientific and societal levels and critics among the same scientific community and society that I would like to discuss.

3. Strategy & Perspective of RILEM, panel discussion

moderated by Dr. Daniela Ciancio, RILEM Implementation Manager

Dr. Daniela Ciancio

Daniela Ciancio is an engineering consultant working for RILEM as Implementation Manager. Her duties and responsibilities are the promotion of RILEM, the coordination and support of RILEM activities and committees and the implementation of RILEM strategic items. Prior to that, Daniela Ciancio was a Senior Lecturer in Structural Engineering at the School of Civil, Environmental and Mining Engineering of the University of Western Australia (UWA) in Perth. Over her 9 years at UWA, she investigated the material and structural behavior of rammed earth by using analytical and experimental approaches. She won two prestigious grants from the Australian Research Council to support her research in this field. She also investigated fibre-reinforced shotcrete with particular emphasis to the use on this material in mining engineering applications. During her PhD partially developed at the Polytechnic University of Catalonia - UPC (Barcelona, Spain), she specialized in the use of zero-thickness interface elements for the numerical simulation of cracks in quasi-brittle materials.

Dr. Nicolas Roussel
PRESIDENT

Professor Dr. Nicolas Roussel graduated from Ecole Normale Supérieure in 1998 and is now in charge of the research activities dealing with mix design and casting processes of construction materials at Université Gustave Eiffel (ex IFSTTAR and LCPC), Paris, France.

Nicolas Roussel has been elected president of the international scientific organization RILEM in September 2021. As a RILEM member since 2006, he has been a deputy editor in chief of the international journal Materials and Structures, Chair of the Technical Advisory Committee of RILEM, Chair of the technical committees 222-SCF, 276-DFC and PFC and founder of the Open Access journal RILEM Technical Letters.

In 2007, he was awarded the Robert L'Hermite medal for his work on rheology of fresh concrete. With a Thompson Reuters H-index of 24, he is the author or co-author of more than 70 papers in scientific journals such as Cement and Concrete Research, Physical Review letters or Journal of Non-Newtonian Fluid Mechanics.

His research focus shifted in the last decade from concrete rheology to the understanding and analysis of existing construction processes or the development of innovative processing technologies. His materials of interest include both market-dominant products and alternative materials with low environmental impacts allowing for waste recycling along with lowered energy consumption and global warming contribution. The processing technologies under the scope cover various technology readiness levels and include mixing and dispersion, centrifugation and granulation, vibration and compaction, spraying and coating and automation in construction.

Prof. Nele De Belie
VICE PRESIDENT

Nele De Belie obtained her Master of Science (1994) and PhD (1997) from Ghent University, after which she carried out postdoctoral research at KULeuven (1997-2000), with 6-month research visits to Mt Albert Research Centre New Zealand and KVL University Copenhagen. Since 2000, she is a Professor in Durability of Cement Bound Materials at Ghent University and head of the "Concrete and Environment" research group which currently consists of about 20 postdoctoral and Ph.D. researchers. In 2020, she became Director of the Magnel-Vandepitte Laboratory for Structural Engineering and Building Materials, with about 140 scientific, technical and administrative staff members.

Nele de Belie is currently the Vice President of the scientific organisation RILEM, elected in September 2021. As a member of this organisation since 2003, she has been the Chair and Convener of the Technical Activities Committees, Chair of the technical committees 238-SCM and 281-CCC and Associate Editor of the international journal Material and Structures. She was awarded the Robert L'Hermite medal in 2010 and was named a RILEM Fellow in 2015.

Her research interests include sustainable concrete with SCMs, concrete degradation and durability, concrete/stone-microorganism interactions (bio-deterioration, bio-consolidation), smart concrete with self-healing or self-cleaning properties, circular economy and life cycle assessment. She has supervised more than 50 (inter)national projects in these areas, and she is currently the coordinator of the Marie Curie ITN SMARTINCS. She is the author of more than 300 scientific publications, 20 book chapters, editor of 10 books and an inventor in 3 patent applications. She is also an editorial board member of 4 scientific journals.

Prof. Hans D. Beushausen
DAC CHAIR

See bio on page 3

Prof. Enrico Sassoni
TAC CHAIR

Enrico Sassoni is an Associate Professor at the University of Bologna (Italy). He worked for 2 years as a Visiting Professor at Princeton University (USA) and for 6 months at the University of Göttingen (Germany).
His main research topics include: (i) innovative materials and techniques for the conservation of historic building materials, (ii) deterioration mechanisms of stones and mortars in outdoor environment and (iii) innovative methods for evaluating the mechanical properties of historic masonries. He has carried out his research through collaborations with academic partners, private companies and public bodies in charge of cultural heritage conservation, resulting in field work in monuments such as the Royal Palace of Versailles in France. His research has received funding from the European Commission («HAP4MARBLE» project, Marie Skłodowska-Curie Individual Fellowship) and industry.
He also served as member of the scientific committee of international conferences, including the 75th RILEM Week 2021 and the 14th International Congress on Deterioration and Conservation of Stone 2020. He is currently Deputy Editor-in-Chief of "Materials and Structures" and member of the Editorial Board of "RILEM Technical Letters", "Frontiers in Materials" and "Coatings". After serving for 3 years as Convener of Cluster E ("Masonry, Timber and Cultural Heritage") of RILEM, he is currently Chair of the Technical Activities Committee (TAC) of RILEM. In 2017, he received a «Gustavo Colonnetti Medal», for his outstanding scientific contribution to the field of construction materials and structures. In 2021 the project "HAP4MARBLE" received the "ILUCIDARE Special Prize 2021 for excellence in heritage-led innovation", awarded during the European Heritage Awards/Europa Nostra Awards ceremony.

Prof. Karen Scrivener
EAC CHAIR

See bio on Page 10

Miss Joanitta Ndawula
RYC CHAIR

Joanitta Ndawula is a PhD student at the University of Cape Town in South Africa. Her research focusses on the mitigation of chloride-induced corrosion of reinforced concrete structures using hydrophobic impregnation. She has been a RILEM member since receiving the RILEM PhD Grant in 2018 which allowed her to attend the RILEM Week in Delft, Netherlands and is currently the RILEM Youth Council chairperson. The RILEM Youth Council works to attract and build networks between new young RILEM members and the RILEM community at large.

Prof. John Provis
MS EIC

John Provis studied Chemical Engineering and Applied Mathematics at the University of Melbourne, Australia, and was awarded a PhD in Chemical Engineering by the same institution in 2006. He moved to the University of Sheffield in 2012 as Professor of Cement Materials Science and Engineering.
He was awarded the 2013 RILEM Robert L'Hermite Medal in recognition of his outstanding contribution to the research and development of geopolymers and other construction materials, and was awarded an honorary doctorate by Hasselt University, Belgium, in 2015 to recognise his leadership in the development of geopolymers and other novel cementitious materials.
His research has been funded by the European Research Council as well as other EU sources, UK Research Councils, industry, and international funding bodies. He is an invited TAC Expert of RILEM, a voting member of committees of BSI, ASTM and ACI, Editor-in-Chief of the RILEM flagship journal Materials and Structures, Deputy Editor-in-Chief of RILEM Technical Letters, Associate Editor of Cement and Concrete Research, and Specialty Chief Editor for the Structural Materials section of Frontiers in Materials.
Prof. Provis has also been appointed as a Visiting Professor at Luleå University of Technology, Sweden, in the Building Materials division.

Dr. Alexandra Bertron
RTL EIC

Alexandra Bertron has been a Professor at INSA *National Institute of Applied Sciences* in Toulouse, France, since 2015 and the deputy director of LMDC *Laboratory of Materials and Durability of Construction* (about 120 people, incl. 45 permanent research staff) since 2021. She graduated (Master's Degree) in 2000 from Ecole Normale Supérieure de Cachan, completed her PhD in 2004 from INSA Toulouse and later obtained her Habilitation to Supervise Research from Paul Sabatier University in 2013.
Her research topics mainly concern the interactions between complex aggressive environments, including microorganisms, and cementitious materials and their implication for the durability, quality and safety of buildings and infrastructures.
She was awarded the RILEM Robert L'Hermite Medal in 2014 and honoured as a RILEM fellow in 2021. She was also recognised as IUF Junior Member (2016-2021).
She is the Editor-in-Chief of RILEM Technical Letters, the open access journal of RILEM, a member of the RILEM Technical Activity Committee (Cluster D convener 2015-2021), and an Associate Editor of Materials and Structures. She was a member of RILEM TC 211-PAE, and co-editor of the State-of-the-Art Report issued by this TC. She was chair of RILEM TC 253-MCI Microorganisms-Cementitious Materials Interactions (2014-2019). She will chair the RILEM Week 2024 that will be hosted by INSA Toulouse and the LMDC.

Dr. Ravindra Gettu
RILEM OUTGOING PRESIDENT

Dr. Ravindra Gettu was the President of RILEM from 2018-2021. Now the Immediate Past President, Dr. Gettu has been involved in the activities of RILEM since 1993. He has been the Chair and Convener of the RILEM Technical Activities Committee, and Deputy Chair of technical committees 187-SOC and QFS. In 2012, he was honored as a RILEM Fellow.

The areas of research of Dr. Gettu have been fracture mechanics of concrete and rock; nonlinear behaviour of cement-based materials; high strength, fibre, textile reinforced and self-compacting concretes; sustainability and the effective use of chemical admixtures. His research has been funded by public organisations, as well as the construction industry, helping him focus on applied research and technology transfer. He has co-authored more than 500 publications, of which more than 100 are peer-reviewed journal papers. He was honoured for outstanding contributions at the Gettu-Kodur Symposium on Advances in Science & Technology of Concrete, organised by the India Chapter of the American Concrete Institute, Mumbai, in 2018. He was elected as a Fellow of the Indian National Academy of Engineering in 2018.

B AWARDS ceremony

chaired by Prof. Enrico Sassoni, TAC Chair (see bio on page 18)

Dr. Ellina Bernard:

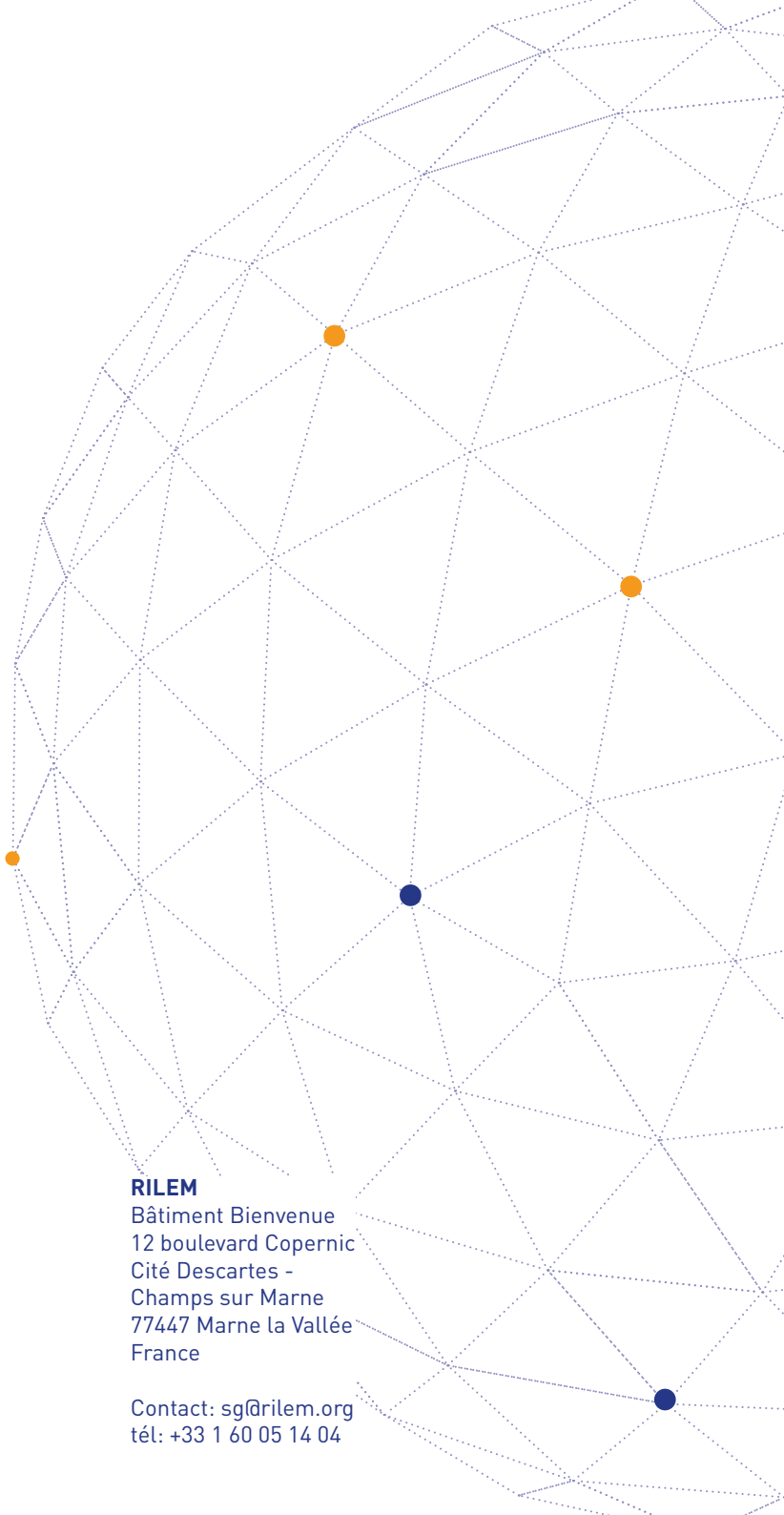
Cement and clay chemistry for the development of low embodied CO2 binders and their durability

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-Fanche-Comté (France), postdoctoral appointments at the University of Bern Switzerland and in the UK, as well as 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 organisers of scientific meetings.

Prof. Qing-feng Liu:

Concrete durability, especially ionic transport, electrochemical rehabilitation and service life prediction

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
Bâtiment Bienvenue
12 boulevard Copernic
Cité Descartes -
Champs sur Marne
77447 Marne la Vallée
France

Contact: sg@rilem.org
tél: +33 1 60 05 14 04