



ORGANIZED by: International Society for Concrete **Pavements**

in conjunction with:

Minnesota DOT

National Road Research Alliance

Australian Society for Concrete Pavements

Transportation Research Board

and the

European Concrete Paving Association SPONSORED by:

Lehigh Hanson

American Concrete Pavement Association

Cemex

Making Waves with Durable, Resilient Concrete Pavements,

12TH ICCP WEBSITE: 12thiccp.concretepavements.org FULL PROGRAM: https://12thiccp.concretepavements.org/program/ REGISTRATION: https://l2thiccp.concretepavements.org/register/



Lehigh Hanson

HEIDELBERGCEMENT Group







WELCOME TO THE 12TH ICCP 2021

The International Society for Concrete Pavements (ISCP) will hold the I2th International Conference on Concrete Pavements (I2th ICCP) September 27 to October 1, 2021

The I2th ICCP theme:

Making Waves with Durable, Resilient Concrete Pavements

This I2th ICCP was originally scheduled for August, 2020 at "The Depot" in Minneapolis, Minnesota, USA, but the global COVID-19 pandemic has continued to spread. Taking into account the unprecedented health measures being taken in countries around the world, unpredictable international travel feasibility, and limited travel opportunities for U.S. state agencies, the I2th ICCP Organizing Committee worked diligently to find the best solution for conference attendees, venues, and the Society itself. Ultimately, the best decision was made for all involved to hold the I2th ICCP 2021 ONLINE!

The International Concrete Pavements Conference (ICCP) has been held every 4 years since 1977. The twelfth conference 2021 will carry on the tradition of a series of international conferences begun in 1977 by Purdue University (ICCPs I-6), then subsequently hosted by ISCP starting with 7th in 2001, in Orlando, Florida. The I2th ICCP 2021 will continue with the traditional focus—present information on new technologies related to the design, construction and rehabilitation of various concrete pavements. Targeted for those who are involved in any aspect of concrete pavement design, practicing

research, construction, testing, evaluation, and rehabilitation including the following:

- Pavement, materials, & geotechnical engineers
- Federal, state, provincial, & municipal engineers
- Consulting engineers
- Contractors
- Material Suppliers
- Academia

ISCP is partnering with SB2 to utilize their virtual campus named "The Aggregate" to host this major international conference with:

- 96 technical presentations—(live and recorded) comprise comprehensive and current coverage on concrete pavement technology
- 10 four-hour workshops— unique online networking opportunities

As we all look forward to a future filled with normalcy and face-to-face opportunities, *ISCP* will host the:

13th ICCP 2024

August 25-29, 2024 in person at "The Depot" Minneapolis, Minnesota, USA

In the meantime, if you have any questions regarding the conference, please contact us at: conference@concretepavements.org

IMPORTANT LINKS:

12TH ICCP WEBSITE:

12thiccp.concretepavements.org

FULL PROGRAM:

https://12thiccp.concretepavements.org/program/REGISTER:

https://12thiccp.concretepavements.org/register/ **EXHIBITORS:**

https://12thiccp.concretepavements.org/exhibitor-opportunities/

SPONSORS:

https://12thiccp.concretepavements.org/conference-sponsors/





REGISTRATION

To promote a wide-reaching international audience, 12th ICCP 2021 registration prices:

USD \$ 80.00 for the first 1,000 registrants

USD \$120.00 after 1,000th registration has been reached

To **REGISTER**, please click here; on each page of this Program Summary; or go to the **I2**th **ICCP Website** registration page and click the button at the bottom of the page: https://I2thiccp.concretepavements.org/register/

All papers must have at least one author registered for your manuscript to be published in the proceedings.

Refunds: Cancellations by September 1, 2021 will be fully refunded

No refunds after September 1, 2021: Instead, ISCP will provide access to proceedings + materials.

PROGRAM SUMMARY

For the **FULL PROGRAM**, please go to: https://l2thiccp.concretepavements.org/program/

MONDAY, SEPTEMBER 27, 2021

PLENARY SESSION



6:00 AM Los Angeles | 9:00 AM New York | 2:00 PM London 4:00 PM Nairobi | 6:30 PM Mumbai 9:00 PM Beijing 11:00 PM Brisbane

Conference Welcome lacob Hiller

The Aggregate Orientation SB2 representative

https://l'2thiccp.concretepavements.org/venue/

Concrete Pavement Resilience Leif Wathne

Honorary Members Induction

Presented by Jacob Hiller (USA) Jeff Roesler (USA) Peter Taylor (USA) Michael Darter (USA) Luc Rens (BELGIUM)

Inductees

Neeraj Buch (USA) Dale Harrington (USA) Bryan Perrie (SOUTH AFRICA) Ram Kanwar Jain (INDIA) Carlos Jofré (SPAIN) – posthumously

Future for Concrete Pavements leffery Roesler

BREAK

7:45 AM Los Angeles | 10:45 AM New York 3:45 PM London 5:45 PM Nairobi | 8:15 PM Mumbai 10:45 PM Beijing | 12:45 AM⁺¹ Brisbane

PODIUM SESSIONS

8:00 AM Los Angeles | 11:00 AM New York 4:00 PM London 6:00 PM Nairobi | 8:30 PM Mumbai 11:00 PM Beijing | 1:00 AM⁺¹ Brisbane

PODIUM SESSION 1: Airfields

PODIUM SESSION 2: Moisture Effects

PODIUM SESSION 3: LCA

Networking and Break

9:45 AM Los Angeles | 12:45 PM New York 5:45 PM London | 7:45 PM Nairobi | 10:15 PM Mumbai 12:45 AM⁺¹ Beijing 2:45 AM⁺¹ Brisbane

WORKSHOPS

I I:00 AM Los Angeles | 2:00 PM New York 7:00 PM London 9:00 PM Nairobi | I I:30 PM Mumbai 2:00 AM⁺¹ Beijing | 4:00 AM⁺¹ Brisbane

WORKSHOP I: Internal Curing for Concrete Pavements (Sponsored by ESCSI)



WORKSHOP 2: Design and Evaluation of Rigid Airfield Pavements (Sponsored by FAA)







TUESDAY, SEPTEMBER 28, 2021

WEDNESDAY, SEPTEMBER 29, 2021

WORKSHOPS

6:00 AM Los Angeles | 9:00 AM New York | 2:00 PM London 4:00 PM Nairobi | 6:30 PM Mumbai 9:00 PM Beijing 11:00 PM Brisbane

WORKSHOP 3: Fiber-Reinforced Concrete Materials for Pavements (Sponsored by FRCA)

WORKSHOP 4: Sustainability of Cement and Concrete Materials Federal Highway **Administration**

(Sponsored by FHWA)

Networking and Break

9:45 AM Los Angeles | 12:45 PM New York 5:45 PM London | 7:45 PM Nairobi | 10:15 PM Mumbai 12:45 AM+1 Beijing | 2:45 AM+1 Brisbane

PODIUM SESSIONS

11:00 AM Los Angeles | 2:00 PM New York 7:00 PM London 9:00 PM Nairobi | 11:30 PM Mumbai 2:00 AM⁺¹ Beijing | 4:00 AM⁺¹ Brisbane

PODIUM SESSION 4: Overlays, Part I **PODIUM SESSION 5: Built and Novel** Environment

PODIUM SESSION 6: Geotechnical Aspects

Break

12:45 PM Los Angeles | 3:45 PM New York 8:45 PM London 10:45 PM Nairobi | 12:30 AM+1 Mumbai 3:45 AM⁺¹ Beijing 5:45⁺¹ Brisbane

PODIUM SESSIONS

1:00 PM Los Angeles | 4:00 PM New York | 9:00 PM London 11:00 PM Nairobi | 1:30 AM⁺¹ Mumbai | 4:00 AM⁺¹ Beijing 6:00 AM+1 Brisbane

PODIUM SESSION 7: Overlays, Part 2 **PODIUM SESSION 8: Long-Life Pavements PODIUM SESSION 9: Case Studies**

PODIUM SESSIONS

6:00 AM Los Angeles | 9:00 AM New York | 2:00 PM London 4:00 PM Nairobi | 6:30 PM Mumbai 9:00 PM Beijing 11:00 PM Brisbane

PODIUM SESSION 10: CRCP Case Studies PODIUM SESSION 11: Freeze-Thaw **Durability**

PODIUM SESSION 12: Policy

Break

7:45 AM Los Angeles | 10:45 AM New York 3:45 PM London 5:45 PM Nairobi | 8:15 PM Mumbai 10:45 PM Beijing | 12:45 AM⁺¹ Brisbane

PODIUM SESSIONS

8:00 AM Los Angeles | 11:00 AM New York 4:00 PM London 6:00 PM Nairobi | 8:30 PM Mumbai 11:00 PM Beijing | 1:00 AM⁺¹ Brisbane

PODIUM SESSION 13: Optimization PODIUM SESSION 14: Sustainable **Materials**

PODIUM SESSION 15: Specifications

Networking and Break

9:45 AM Los Angeles | 12:45 PM New York 5:45 PM London | 7:45 PM Nairobi | 10:15 PM Mumbai 12:45 AM⁺¹ Beijing 2:45 AM⁺¹ Brisbane

WORKSHOPS

10:00 AM Los Angeles | 1:00 PM New York 6:00 PM London | 8:00 PM Nairobi | 10:30 PM Mumbai 1:00 AM⁺¹ Beijing | 3:00 AM⁺¹ Brisbane

WORKSHOP 5: Continuously Reinforced CRSI Concrete Reinforcing Steel Institute **Concrete Pavements** (Sponsored by CRSI)

WORKSHOP 6: Performance-Engineered Mixtures (Sponsored by NCPTC)





THURSDAY, SEPTEMBER 30, 2021 FRIDAY, OCTOBER 1, 2021

PODIUM SESSIONS

6:00 AM Los Angeles | 9:00 AM New York | 2:00 PM London 4:00 PM Nairobi | 6:30 PM Mumbai 9:00 PM Beijing 11:00 PM Brisbane

Podium Session 16: Precast and Rapid Construction

Podium Session 17: Functional Evaluation Podium Session 18: RCC and Heavy Loads

Break

7:45 AM Los Angeles | 10:45 AM New York 3:45 PM London 5:45 PM Nairobi | 8:15 PM Mumbai 10:45 PM Beijing | 12:45 AM⁺¹ Brisbane

PODIUM SESSIONS

8:00 AM Los Angeles | 11:00 AM New York 4:00 PM London 6:00 PM Nairobi | 8:30 PM Mumbai 11:00 PM Beijing | 1:00 AM⁺¹ Brisbane

PODIUM SESSION 19: Modeling **PODIUM SESSION 20: Joint Quality** PODIUM SESSION 21: Pavement ME

Networking and Break

9:45 AM Los Angeles | 12:45 PM New York 5:45 PM London | 7:45 PM Nairobi | 10:15 PM Mumbai 12:45 AM⁺¹ Beijing | 2:45 AM⁺¹ Brisbane

WORKSHOPS

11:00 AM Los Angeles | 2:00 PM New York 7:00 PM London 9:00 PM Nairobi | 11:30 PM Mumbai 2:00 AM⁺¹ Beijing | 4:00 AM⁺¹ Brisbane

WORKSHOP 7: RCC Pavements Technology for Roads and Industrial Sites (Sponsored by RCC Pavement Council)

WORKSHOP 8: Precast **Concrete Pavements** (Sponsored by NPCA)



RCC

WORKSHOPS

6:00 AM Los Angeles | 9:00 AM New York | 2:00 PM London 4:00 PM Nairobi | 6:30 PM Mumbai 9:00 PM Beijing 11:00 PM Brisbane

WORKSHOP 9: Design of Industrial **Concrete Pavement Systems** (Sponsored by PNA)

WORKSHOP 10: Pavement Preservation (Sponsored by IGGA)



PODIUM SESSIONS

10:00 AM Los Angeles | 1:00 PM New York 6:00 PM London | 8:00 PM Nairobi | 10:30 PM Mumbai 1:00 AM⁺¹ Beijing | 3:00 AM⁺¹ Brisbane

PODIUM SESSION 22: Thin Pavements PODIUM SESSION 23: Construction Practices

PODIUM SESSION 24: Curing and Repair

AWARDS CEREMONY & WRAP-UP

12:00 PM Los Angeles | 3:00 PM New York 8:00 PM London 10:00 PM Nairobi | 12:30 AM⁺¹ Mumbai 3:00 AM⁺¹ | Beijing 5:30⁺¹ Brisbane

ICCPs have a long history of excellence in technology transfer and a highlight of awards granted to the best of several categories which the 12th ICCP 2021 will continue during the Wednesday Ceremony:

• Bengt F. Friberg Award for Outstanding Paper by a Young Author

 American Concrete Pavement Association (ACPA) Robert G. **Packard Award** for Design or Design Innovations for Concrete Pavement

 Eldon I. Yoder Award for Outstanding Paper



ICCP Awards information and previous recipients: https://12thiccp.concretepavements.org/awards/





ORGANIZING COMMITTEE

Conference Chair & lake Hiller

ISCP President

Leif Wathne Sponsorship &

Past Chair

Corey Zollinger Finance Tim Smith Past Chair

Bernard Izevbekhai Student Competition Tom Burnham Local Organizing Chair **Armen Amirkhanian** Technical Program &

Paper Review

Workshop Co-Coordinator <u>leff Roesler</u>

& ISCP Past President

Nadine Murray Ex-Officio

Peter Taylor Workshop Co-Coordinator











HILLER

WATHNE

ZOLLINGER SMITH

IZEVBEKHAI











BURNHAM

AMIRKHANIAN ROESLER

MURRAY

For all of our dedicated Committee Members' bios, please go to the ORGANIZING COMMITTEE page: https://12thiccp.concretepavements.org/planning/

ORGANIZERS

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CONFERENCE SPONSORS

The *International Society for Concrete Pavements (ISCP*) is extremely grateful for the steadfast sponsorship of the conference and workshops provided by the following organizations. These organizations have been patient with the Society as we navigate the best path to provide high-quality technology transfer opportunities for our field during difficult times these past 2 years. For the Sponsorship web page, please go to: https://l2thiccp.concretepavements.org/conference-sponsors/

For questions or more information on being a SPONSOR of the **I2th International Conference on Concrete Pavements** or future events, please contact:

Leif Wathne | Sponsorship & Past Chair - 12th ICCP

Phone: +1.202.638.2272

E-mail: <u>conference.sponsorships@concretepavements.org</u>

Lehigh Hanson







WORKSHOP SPONSORS



Expanded Shale, Clay and Slate Institute Rotary Kiln Structural Lightweight Aggregate











Concrete Reinforcing Steel Institute







EXHIBITORS

EXHIBIT opportunities are posted online at *The Aggregate virtual campus*. Virtual exhibit opportunities will be available on *The Aggregate virtual campus* for **USD\$1000**. Information on the exhibit branding and promotion, please see our guide (pdf). For the Exhibitor web page, please go to:

https://12thiccp.concretepavements.org/exhibitor-opportunities/ For questions or more information on being an EXHIBITOR of the

12th International Conference on Concrete Pavements, please contact:

Jake Hiller | Chair - 12th ICCP

Phone: +1.906.281.0743 | E-mail: conference@concretepavements.org





NOTES