



**International Workshop & Nordic mini-seminar:  
Structural lightweight aggregate concrete**

Organized and sponsored by the Norwegian project DaCS<sup>1</sup>

The participants of ongoing Norwegian research projects, Durable Advanced Concrete Structures (DaCS)<sup>1</sup>, have the pleasure of inviting you to a Nordic mini-seminar with the topic *Structural lightweight aggregate concrete* in Trondheim, Norway, which is to be hosted by NTNU. One of the ongoing activities related to the aforementioned research project is the PhD project entitled “*Ductility of lightweight aggregate concrete structures*” carried out by Jelena Zivkovic.

The seminar will consist of international invited speakers to present keynote lectures within their respective topics. In addition, the seminar contributes to a state of the art on the topic and provide exchange of information and further development among the participants.

**Venue:** Norwegian University of Science and Technology (NTNU), Department of structural engineering, Richard Birkelands veg 1A, Trondheim. Meeting room **308-1-132 (Undervisningslab)**.

**Time:** The seminar opens at **9 AM 20<sup>th</sup> of February**, and closes at **5 PM 20<sup>th</sup> of February 2019**.

**Publication:** The speakers should submit **extended abstracts** of the presentations, 3-4 pages each, no later than **January 20, 2019**. See the instructions in attachment. The organizing committee of the mini-seminar will print the seminar papers in a proceeding.

**Registration:** The deadline for registration is **18<sup>th</sup> of February**. The registration fee is NOK 800,- (includes seminar, lunch and proceeding). When registering, you need to provide an invoice address and name of reference person and an invoice will be sent.

**Dinner:** Welcome dinner will be organized at **6 PM at 19<sup>th</sup> of February** at a restaurant close to the venue. Please inform about your participation for the dinner and allergies when registering for the workshop.

**Hotel booking:** The closest hotel to the venue is Scandic Lerkendal Hotel, Klæbuveien 127, 7031 Trondheim, Norway (10 minutes' walk from the venue and 7 minutes by bus to the city center). There are many other convenient hotels nearby and in the city center.

For registration and additional information, kindly respond to Jelena Zivkovic at [jelena.zivkovic@ntnu.no](mailto:jelena.zivkovic@ntnu.no). The final programme will be sent out in the second half of January.

Sincerely yours,

Professor Jan Arve Øverli (NTNU), Professor Terje Kanstad (NTNU) and PhD candidate Jelena Zivkovic (NTNU)

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<sup>1</sup> DaCS – Durable advanced Concrete Structures Project – Increase knowledge of sustainable and competitive reinforced concrete structures in harsh environments funded by The Research Council of Norway and industrial partners, project owner-Kværner AS

## PROGRAM

**(Moderator Jan Arve Øverli)**

8:45 Registration

9:00 Opening of the seminar, introduction and presentation about DaCS project by Prof. Jan Arve Øverli  
(and practical information by Jelena Zivkovic)

9:15 **Session 1 - Material (general about lightweight aggregates that are used for LWAC production)**

- Tor Arne Hammer, Sintef - *Structural LWAC – mix design, material properties and production* (Keynote, 30 min)

- Jody R. Wall, Carolina Stalite Company – *Production and Physical Properties of Expanded Slate Lightweight Aggregate* (15 min)

10:10 Break (Coffe + water)

10:30 **Session 2 - Application of lightweight aggregate concrete (LWAC)**

- Christian Thienel, Institut für Werkstoffe des Bauwesens, Universität der Bundeswehr München – *Application of Lightweight Concrete* (Keynote, 30 min)

- Arianna Minoretti, S.H. Holtberget, B. Costa, J.Veie, Norwegian Public Roads Administration - *Lightweight concrete for the E39 fjord crossing project in Norway* (15 min)

11:30 – 12:30 **Lunch break**

**(Moderator Terje Kanstad):**

12:30 **Session 2 - Application of lightweight aggregate concrete (LWAC)**

- Kjell Tore Fosså, Kværner AS – *LWAC concrete in offshore structures* (15 min)

12:50 **Session 3 – Structural behavior of lightweight aggregate concrete**

- Reid Castrodale, Carolina Stalite Company, ESCSI Institute, Castrodale Engineering Consultants – *Behavior and Design of Structural LWC in USA* (Keynote, 30 min)

13:30 Break (Coffe + water)

14:15 **Session 3 – Structural behavior of lightweight aggregate concrete**

- Hans Stemland, NTNU & Sintef - *Spalling of concrete cover to reinforcement in high strength LWA concrete* (15 min)

- Jelena Zivkovic and J.A. Øverli, NTNU – *Failure of lightweight aggregate concrete under compressive strain gradients* (15 min)

- Jelena Zivkovic and Seyed Mohammad Javad Razavi, NTNU - *Effect of loading rate on the fracture energy of lightweight aggregate concrete subjected to three-point bending test* (15 min)

15:30 Break (Refreshments)

16:00 Closing of the seminar by Prof. Terje Kanstad

16:15 End of workshop

## VENUE

The venue is located at Norwegian University of Science and Technology (NTNU), Department of structural engineering, Institutt for konstruksjonsteknikk, Richard Birkelands veg 1A, Trondheim. Meeting room 308-1-132 (Undervisningslab). The building where venue is happening is approximately a 16 minutes walking according to Google maps from the Student Society in Trondheim (Studentersamfundet) and Elgeseter bridge.



