



December 15, 2022

Asphalt Innovation Symposium 2022

University of Antwerp

EMIB – Road Engineering Research Section

Plenary session 1 - Introducing research at RERS

Chair: Wim Van den bergh

9:00 to 10:30

Opening ceremony and welcome

Vision on future Flemish Road Infrastructure (Du) - Kathy Vandenmeerschaut (Flemish Road and Traffic Agency)

Enhancing and strengthening pavement performance at the port of Antwerp using adhesive layer (tack coat) and fiber-reinforced mixtures (En), Seyed Reza Omranian (University of Antwerp)

Bitumenonderzoek op microschaal (Du) - Johan Blom (University of Antwerp)

Toegevoegde functionaliteiten aan asfaltverhardingen (Du), Cedric Vuye (University of Antwerp)

Optical measurement systems for bituminous material testing (En), Navid Hasheminejad (University of Antwerp)

Parallel session 2A - Innovation in mix design

Chair: David Hernando

11:00 to 12:15

(Theoretical) Mix design of sustainable asphalt: glimpse on the new BRRC-manual (En), Tine Tanghe (BRRC)

The Dominant Aggregate Size Range-Interstitial Component (DASR-IC) Model: a tool to evaluate the gradation characteristics of asphalt mixtures (En), David Hernando (University of Antwerp)

Stepping forward with asphalt balanced mix design (En), Leslie Myers (FHWA)

Parallel session 2B - Newest developments in bitumen research for industry

Chair: Ann Vanelstraete

11:00 to 12:15

Fingerprinting of bituminous binders by rheological and thermal indicators (En), Stefan Vansteenkiste (BRRC)

“Dark Matter” - Advanced ageing and analysis of bituminous binders (En), Bernhard Hofko (TU Wien)

Uncovering the physico-chemical degradation mechanisms in bituminous binders (En), Aikaterini Varveri (TU Delft)

New insights on determination of bitumen stiffness (En), Evangelos Manthos (AUTH)

12:15 to 13:15 **Lunch break**

Plenary session 3 - BIM and data driven research / Technologies for the future

Chairs: Natasha Blommaert + Timo Nuttens

13:15 to 14:30 **BIM4Infra Pavements (Du)**, Natasha Blommaert (AWV)
Connected Data for Effective Collaboration 'CODEC' Pilot project "tunnels" (Du), Raf Vanlathem (AWV)
Milieu-impact van een infra-project – evaluatie via BIM, OTL en EPD's (Du), Pieter Keppens (Copro)
Prospecting and mining resources in pavements (En), Zhaoxing Wang (University of Antwerp)

14:30 to 15:00 **Break**

Parallel session 4A - Sustainable and climate-resilient pavement

Chair: Zhi Cao

15:00 to 16:30 **Robust comparative LCA of circular pavement designs using a probabilistic approach (En)**, Zhi Cao (University of Antwerp)
Analyse van de economische en milieueffecten van het gebruik van bitumen-gestabiliseerd granulaat als alternatief funderingsmateriaal voor asfaltverhardingen (Du), Ben Moins (University of Antwerp)
Quantifying Flexible Pavement Damage After Flooding Due to Loss of Stiffness: Framework for Developing Time-Depth-Damage Functions (En), Yaning Qiao
How green is this asphalt? Recommendations for LCA of road pavements (Du), Elizabeth Keijzer (TNO)
Closing ceremony by Cedric Vuye

Parallel session 4B – PhD defense of Georgios Pipintakos

15:00 to 17:00 **Towards an enhanced understanding of the oxidative ageing mechanisms in bitumen (En)**
PhD candidate: Georgios Pipintakos
Chair: Christophe Vande Velde (University of Antwerp)
Supervisors: Wim Van den bergh (University of Antwerp)
Hilde Soenen (Nynas)
Jury members: Aikaterini Varveri (TU Delft)
Sabine Van Doorslaer (University of Antwerp)
Bernhard Hofko (TU Wien)
Evangelos Manthos (A.U.Th)
Xiaohu Lu (Nynas)

16:30 – 18:00 **Reception**

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