

Keynote Speakers

1. **Ashraf El Damatty**, Ph.D., MBA, P.Eng., F.CSCE

Professor and Chair, Department of Civil and Environmental Engineering
Research Director, WindEEE Research Institute
The University of Western Ontario, Canada

New Frontier in Wind and Structural Engineering

Abstract:

An extensive research program in various applications in Structural and Wind Engineering is currently undertaken at The University of Western Ontario, Canada, the home of the Boundary Layer Wind tunnel Laboratory. The research is supported by unique infrastructure and testing facilities recently established at Western. Two research facilities, the Insurance Lab for Better Homes (ILBH) and the WindEEE dome, enabling full and model scale testing of structures under various types of wind storms, will be described. The ILBH is a \$7M research infrastructure that allows testing full-scale residential houses under simulated wind loads. The WindEEE dome was established through a \$30M infrastructure grant provided by the Canadian Federal and Ontario governments. It has about 120 fans that can be controlled separately, presenting the first and only three-dimensional wind testing chamber in the world. A number of unique and innovative projects currently undertaken at both facilities will be presented. These include research that the group is leading worldwide on the effect of tornadoes and thunderstorm wind on energy infrastructures, the resistance of low-rise building to extreme wind, nonlinear performance-based design approach of tall buildings and innovative studies on wind energy structures.

Speaker Bio: Dr. Ashraf El Damatty, Professor and Chair of the Department of Civil and Environmental Engineering at the University of Western Ontario, London, Ontario, Canada. He is a Fellow of the Canadian Society of Civil Engineering and the Engineering Institute of Canada.. He is a Research Director at the WindEEE Research Institute and Co-Editor-in-Chief of the Journal of Wind and Structures. He holds the title of High End Expert at Tongji University, China. He obtained a BSc. and M.Sc. from Cairo University in 1986 and 1991, Ph.D. in Structural Engineering from McMaster University, Canada, in 1995, and an MBA in 2016 in Higher Education Management from University College, London, UK. He is the founder of the CSCE Steel Structures Committee and serves currently as the Chair of the CSCE Structure Division. He has consulted on many projects in North America and the Middle East He has written over 180 publications and has secured research funding exceeding \$15.0 M. He has supervised more than 30 Ph.D. and 20 M.Sc. students and has been invited as keynote speaker in many countries around the globe. He received several awards including the Alan Yorkdale Award by ASTM, Best Paper Award at the Canadian Conference on Effective Design of Structures, Honourable Mention in 2014 Casimir Gzowski Medal Competition, 2015 CSCE Whitman Wright Award, 2016 CSCE Horst Leipholtz Medal and Western University Faculty Scholar Award. His research work has influenced the international codes and the Engineering practice worldwide.

2. Said KENAI,

**Professor Said KENAI
Materials and civil engineering Laboratory
Civil Engineering Department,
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PERFORMANCE OF RECYCLED AGGREGATES IN ORDINARY AND SELF-COMPACTING CONCRETE: A REVIEW

ABSTRACT

Construction industry generates large amounts of debris during construction and demolition. This waste materials is mainly concrete or masonry. It needs to be recycled and reused as recycled aggregates for partial or total substitution of natural aggregates to reduce energy consumption and the use of natural resources and hence contributes to a more sustainable construction industry. In this paper, the need and the beneficial effects of recycling are explained and the current situation worldwide is highlighted. The international specifications are summarized. Recycled aggregates (RA) physical and mechanical properties are discussed. A state of the art of the recycled aggregates concrete performance at the fresh and hardened state of ordinary and self-compacting concrete is summarized. Durability performance under aggressive environment and hot climate are also discussed. The effect of contamination on the performance of ordinary and roller compacted concrete is discussed. Successful applications of RA in producing self-compacting and roller compacted concrete are also discussed.