



**German University in Cairo
Faculty of Engineering and Materials Science**

Civil Engineering Program



**First Workshop on
The Eurocodes for Building Design**

**The German University in Cairo
5th to 7th of April, 2015
www.guc.edu.eg**

Organizing Committee

Prof. Dr. Ibrahim El-Dimeery, Dean of Graduate Studies
Prof. Dr. Moustafa Baraka, Program Director
Prof. Dr. Nayer El-Esnawy, Head of Department
Dr. Mona Badr, Associate Professor
Dr. Amr Shaat, Associate Professor
Dr. Badr Abouzeid, Assistant Professor

Day 1, Sunday 5th of April

Topic: Design of Reinforced Concrete Structures
Prof. Dr. Balthasar Novak, The University of Stuttgart

Day 2, Monday 6th of April

Topic: Steel Design and Seismic Design
Prof. Dr. Ahmed Elghazouli, Imperial College London
Dr. Amr Shaat, The German University in Cairo

Day 3, Tuesday 7th of April

Topic: Geotechnical Engineering and Foundation Design
Dr. Khalid Abdel-Rahman Barakat, Leibniz University of Hannover



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Day 1, Sunday 5th of April

8:00 - 9:00	Registration
9:00 - 9:30	Opening Session Chair: Prof. Dr. Ibrahim El-Dimeery and Prof. Dr. Moustafa Baraka
9:30 - 10:00	Tea/Coffee Break
10:00 - 11:30	Session 1-1 Introduction to the Eurocodes - Basis of design - Limit states - Actions on structures Chair: Prof. Dr. Moustafa Baraka Lecturer: Prof. Dr. Balthasar Novak, The University of Stuttgart
11:30 - 11:45	Tea/Coffee Break
11:45 - 1:00	Session 1-2 Eurocode 2, Design of Concrete Structures - Material properties - Time dependent behaviour - Environment conditions, concrete cover - Ultimate limit state design, for bending, shear - Torsion, punching Chair: Prof. Dr. Nayer El-Esnawy Lecturer: Prof. Dr. Balthasar Novak, The University of Stuttgart
1:00 - 2:00	Lunch Break
2:00 - 3:30	Session 1-3 Eurocode 2, Design of Concrete Structures - Introduction to strut and tie models/important examples - Serviceability limit states - Detailing rules Chair: Dr. Mona Badr Lecturer: Prof. Dr. Balthasar Novak, The University of Stuttgart
3:30 - 3:45	Tea/Coffee Break
3:45 - 4:45	Session 1-4 Eurocode 2, Design of Concrete Structures - Prestressed concrete - Fatigue Chair: Dr. Badr Abouzeid Lecturer: Prof. Dr. Balthasar Novak, The University of Stuttgart



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Day 2, Monday 6th of April

10:15 - 12:00	Session 2-1	Eurocode 3, Steel Design - Overview and Axial Members - Design of Beams and Other Components Chair: Dr. Badr Abouzeid Lecturer: Dr. Amr Shaat, The German University in Cairo
12:00 - 1:00	Lunch Break	
1:00 - 2:30	Session 2-2	Eurocode 8, Seismic Design – Overview and Seismic Actions Chair : Prof. Dr. Nayer El-Esnawy Lecturer: Prof. Dr. Ahmed Elghazouli, Imperial College London
2:30 - 2:45	Tea/Coffee Break	
2:45 - 3:45	Session 2-3	Eurocode 8, Principles of Seismic Design for Buildings Chair : Dr. Amr Shaat Lecturer: Prof. Dr. Ahmed Elghazouli, Imperial College London



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Day 3, Tuesday 7th of April

- 10:15 - 12:00 Session 3-1 Eurocode 7, Introduction to Partial Factor of Safety Concept and an Overview of EC7 and its Application in Germany
Chair: Dr. Mona Badr
Lecturer: Dr. Khalid Abdel-Rahman Barakat, Leibniz University of Hannover
- 12:00 - 1:00 Lunch Break
- 1:00 - 2:30 Session 3-2 Eurocode 7, Design of Shallow and Deep Foundations
- Introduction
- Stability checks
- Behavior of piles under compressive and tensile forces
- Worked examples
Chair: Dr. Amr Shaat
Lecturer: Dr. Khalid Abdel-Rahman Barakat, Leibniz University of Hannover
- 2:30 - 2:45 Tea/Coffee Break
- 2:45 - 3:45 Session 3-3 Eurocode 7, Design of Retaining Walls
- Introduction
- Calculation of active and passive Earth pressure
- Stability Checks of Walls
- Worked examples
Chair: Dr. Mona Badr
Lecturer: Dr. Khalid Abdel-Rahman Barakat, Leibniz University of Hannover