GEOTECHNICAL ASPECTS OF UNDERGROUND CONSTRUCTION IN SOFT GROUND

16-18 May 2011, Roma, ITALY

organised by:

ISSMGE Technical Committee 204

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Technical Committee TC204 (formerly TC28) “Underground Construction in Soft Ground” of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) has a major commitment towards collecting information concerning tunnel design and construction in the urban environment, with regard to both bored and braced excavations.


The themes of the Symposium are in line with the terms of reference of Technical Committee TC204. These will be covered in six Technical Sessions during the first two days of the symposium:

- TS1: Construction, design, and measured performance of bored tunnels
- TS2: Illustration of current activities of TC204
- TS3: Physical and numerical modelling of deep excavation and bored tunnels
- TS4: Construction, design, and measured performance of deep excavation
- TS5: Design methods and predictive tools for deep excavation and bored tunnels
- TS6: Ground movements, interaction with existing structures, and mitigation measures

Each session will consist of a General Report and three Panel presentations of selected individual papers. Following a well established custom, there will be plenty of time for discussion. At the beginning and at the end of each day an invited Special Lecture will be delivered.

On the third day of the Symposium there will be an opportunity to visit the worksites of line C of Roma Underground, currently under construction. One extra technical visit to the construction sites of Line 6 of nearby Napoli Underground has been organised on the fourth day.
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Lecturer/General Reporter</th>
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</thead>
<tbody>
<tr>
<td>08:00 – 08:30</td>
<td>Registration</td>
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<tr>
<td>08:30 – 08:45</td>
<td>15' Opening</td>
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<tr>
<td>08:45 – 09:45</td>
<td>SL1: The New Mexico City deep sewerage system</td>
<td>Lecturer: Mario Aguillar-Tellez (Mexico)</td>
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<tr>
<td>09:45 – 11:30</td>
<td>TS1: Construction, design, and measured performance of bored tunnels</td>
<td>General Reporter: Chris Menkiti (United Kingdom)</td>
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<tr>
<td>09:45 – 11:30</td>
<td>30' Panel Presentations</td>
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<tr>
<td>11:30 – 11:50</td>
<td>20' Coffee break</td>
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<tr>
<td>11:50 – 12:40</td>
<td>TS2: Illustration of current activities of TC204</td>
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<td>12:40 – 13:00</td>
<td>20' Launch of “Fujita Lecture”</td>
<td>Robert Mair, Hiro Akagi</td>
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<td>13:00 – 14:20</td>
<td>Lunch break</td>
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<tr>
<td>14:20 – 16:10</td>
<td>TS3: Physical and numerical modelling of deep excavations and bored tunnels</td>
<td>General Reporter: Esve Jacobsz (South Africa)</td>
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<td>14:20 – 16:10</td>
<td>30' Panel Presentations</td>
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<tr>
<td>16:10 – 17:00</td>
<td>30' Floor Discussion</td>
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<tr>
<td>Time</td>
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<tr>
<td>16:10 – 16:30</td>
<td>20'</td>
<td>Coffee break</td>
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</tbody>
</table>
| 16:30 – 17:10         | 40'      | Overview of current extensions to Roma and Napoli Underground          | **A. Sciotti**: Line B1 - Roma Underground  
**F. Rotundi**: Line C - Roma Underground  
**G. Russo**: Line 6 - Napoli Underground |
| 17:10 – 18:10         | 60'      | **SL2**: Long-term settlement mechanisms of tunnels in Shanghai        | **Lecturer**:  
**Charles W.W. Ng** (Hong Kong) |
| 17:10 – 18:10         | 60'      | SL2: Long-term settlement mechanisms of tunnels in Shanghai            | **Lecturer**:  
**Charles W.W. Ng** (Hong Kong) |
| 18:10 – 19:00         | 50'      | SL3: Deep excavations for North - South Line Amsterdam, an update and lessons learned | **Lecturer**:  
**Frits van Toll** (the Netherlands) |
| 19:00 – 20:00         | 60'      | TS4: Construction, design, and measured performance of deep excavations | **General Reporter**:  
**Jamie Standing** (United Kingdom) |
| 20:00 – 20:30         | 30'      | Panel Presentations                                                    |                                                                                     |
| 20:30 – 21:30         | 60'      | 30' Floor Discussion                                                   |                                                                                     |
| 21:30 – 22:30         | 60'      | Coffee break                                                           |                                                                                     |

**PROGRAMME - TUESDAY 17**

<table>
<thead>
<tr>
<th>Time</th>
<th>Duration</th>
<th>Session</th>
<th>Lecturers/Reporters</th>
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</thead>
</table>
| 08:30 – 09:30         | 60'      | SL3: Deep excavations for North - South Line Amsterdam, an update and lessons learned | **Lecturer**:  
**Frits van Toll** (the Netherlands) |
| 09:30 – 11:15         | 1h 45'   | TS4: Construction, design, and measured performance of deep excavations | **General Reporter**:  
**Jamie Standing** (United Kingdom) |
| 09:30 – 11:15         | 45'      | Panel Presentations                                                    |                                                                                     |
| 11:15 – 11:35         | 20'      | Coffee break                                                           |                                                                                     |
| 11:35 – 13:20         | 1h 45'   | TS5: Design methods and predictive tools for deep excavations and bored tunnels | **General Reporter**:  
**Luigi Callisto** (Italy) |
| 11:35 – 13:20         | 45'      | Panel Presentations                                                    |                                                                                     |
| 11:35 – 13:20         | 30'      | 30' Floor Discussion                                                   |                                                                                     |

**SL3**: Deep excavations for North - South Line Amsterdam, an update and lessons learned  
**Lecturer**:  
**Frits van Toll** (the Netherlands)  
**TS4**: Construction, design, and measured performance of deep excavations  
**General Reporter**:  
**Jamie Standing** (United Kingdom)  
**TS5**: Design methods and predictive tools for deep excavations and bored tunnels  
**General Reporter**:  
**Luigi Callisto** (Italy)
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<th>Time</th>
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<th>Session</th>
<th>Details</th>
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<tbody>
<tr>
<td>13:20 – 14:40</td>
<td>1h20'</td>
<td>Lunch break</td>
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<tr>
<td>14:40 – 16:25</td>
<td>1h45'</td>
<td>TS6:</td>
<td>Ground movements, interaction with existing structures and mitigation</td>
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<td></td>
<td>30'</td>
<td>General Reporter:</td>
<td>measures</td>
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<td></td>
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<td>Tarcisio Barreto Celestino</td>
<td>(Brasil)</td>
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<tr>
<td>16:25 - 16:45</td>
<td>20'</td>
<td>Coffee break</td>
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<tr>
<td>16:45 – 17:45</td>
<td>60'</td>
<td>SL4:</td>
<td>Evaluating the effects of tunnel excavation on historical buildings:</td>
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<tr>
<td></td>
<td></td>
<td>Lecturer:</td>
<td>the example of a new subway line in Rome</td>
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<td>Sebastiano Rampello</td>
<td>(Italy)</td>
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<tr>
<td>17:45 - 18:00</td>
<td>15'</td>
<td>Closure</td>
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<td>20:00 – 23:00</td>
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<td>Gala Dinner at Palazzo Brancaccio</td>
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**TECHNICAL VISITS, WEDNESDAY 18 OF MAY 2011**

Three Technical Visits have been arranged to the worksites of Line C of Roma Underground:
TV1: TBM and Malatesta Station shaft (maximum 30 people)
TV2: Alessandrino Station tunnels and shaft (maximum 60 people)
TV3: Mirti Station (maximum 60 people)
You will be asked to indicate the Technical Visit of your choice at the moment of registration. Available places will be allocated on a first-come first-served basis.

**TECHNICAL VISIT, THURSDAY 19 MAY 2011**

A technical visit for a maximum number of 50 people has been organised to the worksites of Line 6 of nearby Napoli Underground. These include S.Pasquale station shaft and monitoring system, and the TBM at Mergellina. You will be asked to confirm/express your intention
to participate to the visit at the moment of registration. For those who have not already expressed their intention to participate, available places will be allocated on a first-come first-served basis.

**SYMPOSIUM LANGUAGE**

The official language of the symposium will be English.

**PROCEEDINGS/PREPRINTS**

The final volume of proceedings will be published after the Symposium. These will include all the technical papers, the five General Reports, and the four invited Special Lectures. Xeroxed pre-prints of the proceeding have been substituted by a USB pen drive containing all the papers, which will be distributed to all delegates at the moment of registration.

**SYMPOSIUM VENUE**

Roma Eventi - Fontana di Trevi, Piazza della Pilotta 4 - Roma