

ITA/AITES

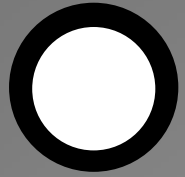
ITA WORLD TUNNEL CONGRESS 2006

CLOSING SCIENTIFIC SUMMUP

André Assis

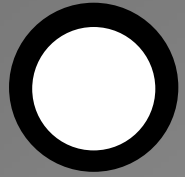
(ITA Past President / UnB / EPFL)

Seoul, Korea – 26 April 2006



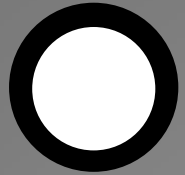
ITA WTC 2006: Technical & Scientific Production

- **ITA Training Course**
- **World Tunnel Congress**
 - **Keynote lectures**
 - **Technical and Poster Sessions**
 - **ITA Open Session**
- **ITA Working Groups**



ITA Training Course 2006

- **Tunnel Engineering**
 - **Class Load of 12 h (~ 1 credit)**
 - **18 Lecturers**
 - **15 from ITA (9 different countries)**
 - **3 from Korea**
- **130 Professional Students**
 - **112 from Korea**
 - **18 foreigners (other 6 countries)**



ITA Training Course 2006

Tunnel Engineering

**Conventional
Tunnelling**

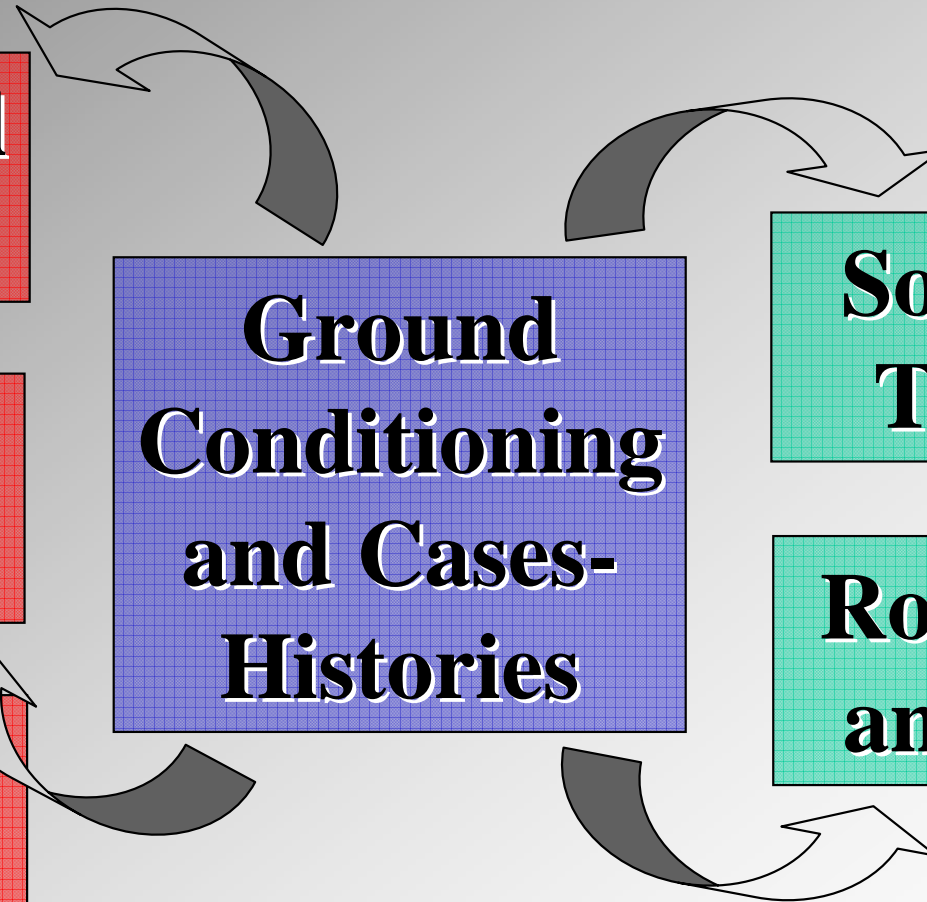
**Mechanised
Tunnelling**

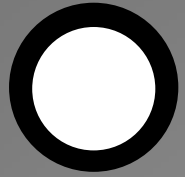
**Special
Tunnelling**

**Ground
Conditioning
and Cases-
Histories**

**Soft Ground
Tunnelling**

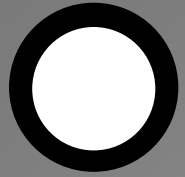
**Rock Tunnels
and Caverns**





World Tunnel Congress

- **Four Keynote Lectures**
 - **Six ITA Open Session Lectures**
- Special Issue**
- **Sixteen Technical and One Poster Sections**
 - **Nine different topics**
 - **129 papers presented**
 - **69 posters**
- 198 papers in the proceedings**



Papers per Session

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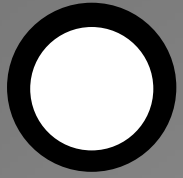
Keynote Lectures	4	Special Issue
Open Session	6	
Site Investigation and Design	19	P R O C E E D I N G S
Mechanised Excavation & Instrumentation	24	
Health and Safety	26	
Tunnel Operation, Repairing and Maintenance	17	
Special Projects	10	
Tunnels in Soils, Rocks & Mixed Ground	50	
Research and Development	35	
Environmental and Urban Issues	8	
Planning & Development of Underground Space	9	



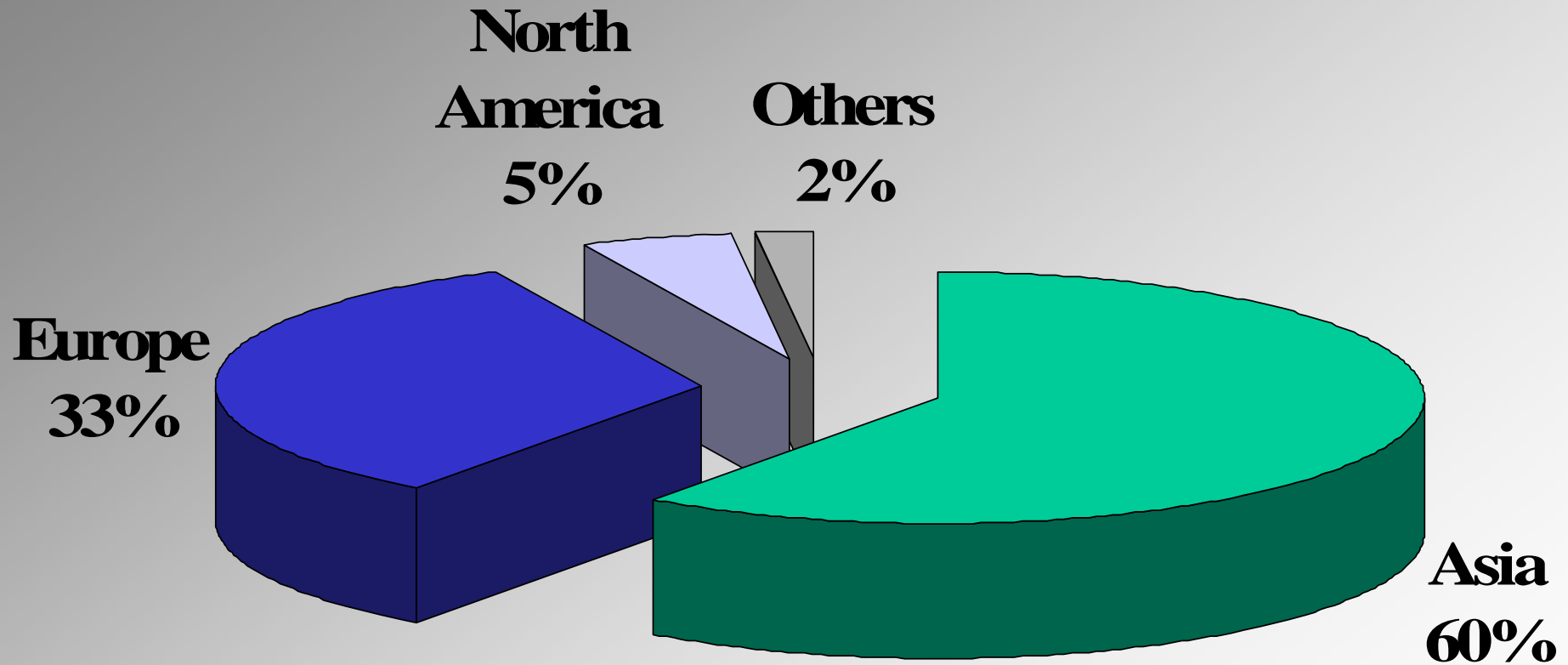
Papers per Country

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Korea	70	C O U N T R I E S
Japan	21	
China	18	
Netherlands	11	
Germany	10	
Czech Republic, USA	8	
Iran, UK	7	
Italy	6	
Austria, Denmark, France	4	
Romania, Spain, Turkey	3	
Greece, Russia, Thailand	2	
Other 14 Countries	1	



Papers per Geographical Region



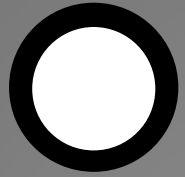


Main Remarks

From the ITA WTC 2006

Keynote Lectures

- **3 speakers addressed important points, preparing the ground for future presentations and discussions**
 - **Evolution of contractual practices in the US**
 - **Risk management related to conventional tunnels**
 - **Fire protection (statistics, requirements and costs)**
- **Evolution of Korean tunnelling technology (present status and future projects)**



Main Remarks

From the ITA WTC 2006

ITA Open Session

Prepared and coordinated by M. Knights (chair of the ITA Risk Management Task Force)

- **Involvement of 3 ITA WGs, presenting the guidelines for risk management, contractual practices and health and safety**
- **Risk management from a contractor's point of view**
- **Risk management from the insurer's point of view (ITIG Code of Practice)**



Main Remarks

From the ITA WTC 2006

ITA Open Session

- **Need to reduce tunnel failures**
- **Proactive risk management required**
- **Lively and solid discussions**

- **ITA wants to promote better quality**
- **A time to remember of this ITA WTC 2006**

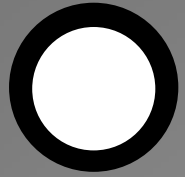


Main Remarks

From the ITA WTC 2006

ITA Working Groups & Committees

- **13 WGs and 1 Committee**
- **170 members**
- **24 actions under development**



Main Remarks

From the ITA WTC 2006

ITA WG Reports and Products announced:

- **Settlement Induced by Tunnelling in Soft Ground**
- **Guidelines for Structural Fire Resistance for Metro Tunnels**
- **State-of-the-Art Report on Shotcrete Use**
- **General Report on Conventional Tunnelling**
- **PPT presentation on Quality in Tunnelling**
- **Website implementation**