2nd Announcement

“Resilient, sustainable and safe rural roads & earth structures for a better future »
3, 4 & 5 May 2023
Hotel: El Mouradi Gammarth, Tunis
- Tunisia-
Organized by:
- Tunisian road association (ATR) https://atr-tunisie.org/

The PIARC Program and international seminars
PIARC (the World Road Association) is a non-profit, non-political organization whose mission includes organizing forums, disseminating good practices, and promoting efficient tools for decision support in road and road transport.

As part of its work, and since 1999, the Association has been organizing a program of international seminars which strengthens its presence in the world, its consideration of the needs of developing countries and countries in transition, and makes the results of the Association's work more widely known in these countries.

This Seminar is co-organized by two PIARC technical committees TC2.2 and TC4.3.

**Technical Committee TC2.2**
Rural areas provide goods, industries, and workforce for all communities, and roads are the most important way to exchange goods and services. Technical Committee 2.2 “Accessibility and Mobility in Rural Areas” focuses on accessibility in rural areas and on mobility needs.

Road networks in rural areas are very extensive compared to the low density of population, and as a result it is difficult to finance the construction and the maintenance of those networks and the safety conditions are generally poor. Therefore, this Technical Committee focuses on:

- Accessibility and mobility in rural areas,
- Improving road safety in rural areas,
- Technical solutions for paved and unpaved roads.

**Technical Committee TC4.3**
Technical Committee 4.3 “Earthworks” focuses in particular on the identification of technologies and innovations in their construction and maintenance. The knowledge gained within the framework of this work will then also be incorporated into the further development of the Earth Work Manual, which will be made available in an updated and expanded version. Therefore, this Technical Committee focuses on:

- Measures for increasing resilience of earthworks,
- Techniques and innovation for construction and maintenance of earthworks,
- Update Earthworks Manual "Design and Construction of earth-structures".

Objectives of the seminar
This international seminar brings together road professionals from government, academia, private sector, universities to:

- Improve understanding of rural roads and earth structures,
- Apprehend the challenges of rural roads and earth structures,
- Learn about best practices and models of implementation which could be used as examples,
- Exchange ideas between the participants and propose solutions,
- Network and connect road professionals to one another.

Target audience

- Road administrations,
- Professionals from road sector,
- Engineers,
- Technical designers and design offices,
- Road network managers,
- Suppliers of road construction and maintenance,
- Technical assistance offices, universities,
- Engineering students.

Seminar venue and dates
The seminar will take place on 3, 4 &5 May 2023 in Tunis, Tunisia.

Tunisia is located in the Maghreb region of North Africa. It is bordered by Algeria to the west and southwest, Libya to the southeast, and the Mediterranean Sea to the north and east. The country also shares maritime borders with Italy. It has an area of about 164,000 km² and a population of 12 million. Its coastline is approximately 1,150 km long. The capital of Tunisia is the city of Tunis. Tunisia is a tourist destination full of fascinating attractions.

Course and Languages of the seminar
The seminar will take place on May 3rd and 4th followed by a technical visit on May 5th.

Plenary sessions, parallel sessions, debates and round tables around several themes as presented in the program below. The languages used in the seminar will be French and English with simultaneous translation.

Program

Les sessions du séminaire seront organisées selon le programme suivant:
## Day 1: Wednesday, 03 May 2023

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>08:00 - 09:00</strong></td>
<td>Registration</td>
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<tr>
<td><strong>09:00 - 10:15</strong></td>
<td>Welcoming words</td>
<td>Aida Bergaoui, President ATR, ATR Tunisian Road Association</td>
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<tr>
<td><strong>09:10 - 09:45</strong></td>
<td>Opening session</td>
<td>Souleman Oussiman, Chair of PIARC Technical Committee 2.2, Patrick Boisson, Chair of PIARC Technical Committee 4.3</td>
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<tr>
<td><strong>09:45 - 10:10</strong></td>
<td>Opening words</td>
<td>Ms Sarra Zenza Zaafrani, Minister of Equipment and Housing of Tunisia</td>
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<tr>
<td><strong>10:10 - 10:30</strong></td>
<td>Keynote lecture</td>
<td>Ms Sarra Zenza Zaafrani, Minister of Equipment and Housing of Tunisia</td>
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<tr>
<td><strong>11:00 - 11:30</strong></td>
<td>Needs for a more resilient roads in a frame of a climate change</td>
<td>Slah Zouari, first delegate of PIARC, Ministry of Equipment and Housing of Tunisia</td>
</tr>
<tr>
<td><strong>11:00 - 11:05</strong></td>
<td>Introduction</td>
<td>Session Chair: Imen Makhlouf, Tunisie. TC2.2</td>
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<tr>
<td><strong>11:05 - 11:25</strong></td>
<td>Tunisia’s experience in the construction and maintenance of rural roads</td>
<td>Mosbeh Zeidi, Ministry of Equipment and Housing, Tunisia</td>
</tr>
<tr>
<td><strong>11:25 - 11:45</strong></td>
<td>Enjeux de mobilité et d’équité en matière d’accès des zones rurales aux grandes villes</td>
<td>André Broto, VINCI Autoroutes, France, PIARC Strategic Theme 2, Pierre Danset, Tunisie</td>
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<tr>
<td><strong>11:45 - 12:05</strong></td>
<td>Panel of earth structure case studies</td>
<td>Enrico Mitiiga, TC 4.3, Italy</td>
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<td><strong>12:05 - 14:00</strong></td>
<td>Lunch</td>
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<tr>
<td><strong>12:05 - 12:25</strong></td>
<td>Transport Infrastructure as factor of economic development and social inclusion in Mali</td>
<td>Dialo Cheikh Omar, TC2.2 (Mali)</td>
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<tr>
<td><strong>12:25 - 12:40</strong></td>
<td>PIARC earthwork manual and unpaved roads or Morocco experience of rural road construction</td>
<td>Hind Bendidi, TC4.3, Morocco</td>
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<tr>
<td><strong>12:45 - 14:00</strong></td>
<td>Lunch</td>
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<tr>
<td><strong>14:00 - 14:30</strong></td>
<td>Session 2: Best practices for rural roads and earthworks: Current practices in LMIC’s</td>
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<tr>
<td><strong>14:00 - 14:05</strong></td>
<td>Introduction</td>
<td>Session Chair: Marwa Mejri, TC2.2, Tunisia</td>
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<tr>
<td><strong>14:05 - 14:25</strong></td>
<td>Rural roads management in Burkinafaso</td>
<td>Soulemou Oussiman, GEFA, Burkina Faso, TC 2.2</td>
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<td><strong>14:25 - 14:45</strong></td>
<td>Performance based contract</td>
<td>Mohamed Zmerli, DEER, Ministry of Equipment and Housing, Tunisia</td>
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<tr>
<td><strong>14:45 - 15:05</strong></td>
<td>Maintenance of rural roads by local communities</td>
<td>Abdulaya Kader, TC 2.2, Niger</td>
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<td><strong>15:05 - 15:20</strong></td>
<td>Improvement strategy of rural roads in Tunisia</td>
<td>Zina Dekhil, Ministry of Housing and Equipment of Tunisia</td>
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<tr>
<td><strong>15:20 - 15:30</strong></td>
<td>Q&amp;A and debate</td>
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<td><strong>15:30 - 15:45</strong></td>
<td>Lunch</td>
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<td><strong>15:45 - 16:00</strong></td>
<td>Session 3: Low cost maintenance and innovative solutions for sustainable rural roads and earthworks</td>
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<td><strong>15:45 - 16:05</strong></td>
<td>Introduction</td>
<td>Session Chair: Kaouther Machta, ATR, TC2.4, Tunisia</td>
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<tr>
<td><strong>16:05 - 16:25</strong></td>
<td>Maintenance of earth structure, with a focus on visual inspection</td>
<td>Alexandra Ferreira, TC 4.3, Portugal</td>
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<tr>
<td><strong>16:25 - 16:45</strong></td>
<td>How some UK municipal authorities are using advanced technology and innovation for safe, resilient and sustainable roads</td>
<td>Darren Capes, ITS Policy Lead, Department for Transport, UK</td>
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<tr>
<td><strong>16:45 - 17:05</strong></td>
<td>“Materials, research and sustainability. Case studies for resilient platforms”.</td>
<td>Jamel Neji, ENIT, Tunisia</td>
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<tr>
<td><strong>17:05 - 17:25</strong></td>
<td>Few examples of innovation in earthworks</td>
<td>Jason Hasting, TC 4.3, USA</td>
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<tr>
<td><strong>17:25 - 17:45</strong></td>
<td>Application of innovation for sustainable construction in Tunisia: RE-MED project</td>
<td>Oumaya MARZOUK, Directrice Projets Economie Circulaire, DTerCE/AA/TT Tunisie, France.</td>
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<tr>
<td><strong>17:45 - 18:00</strong></td>
<td>Q&amp;A and debate with the audience</td>
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Day 2: Thursday, 04 May 2023

13:00-14:00
Session 6: Technical solutions for paved and unpaved roads
Introduction
Imen Ben Hassine, ATR, TC4.3, Tunisia

14:00-15:30
Session 7: Climate change and resilience of rural roads and earthworks
Introduction
Modératrice: Aida Bergaoui, ATR, TC4.1, Tunisie

14:00-14:05
Introduction
Imen Makhlouf TC2.2, Tunisia

14:05-14:25
"To pave or not to pave: Developing a framework for systematic decision making in the choice of paving technologies for rural roads.
Stephen Muzira
Investment and Program Lending (OPSIL), World Bank

14:25-14:45
Bitumen emulsion and rural roads
François Chaignon, TC 2.2, France

14:45-15:05
Road base construction via environmentally safe soil stabilization
Edward Rostin, TerraFusion International, USA

15:05-15:25
Alternatives to conventional solutions for rural roads
Sami Montacer, Geotechnical Expert, Tunisia

Q&A and debate

15:30-16:00
Session conclusions

16:00-17:30
Session 7: Climate change and resilience of rural roads and earthworks

16:00-16:05
Introduction

16:05-16:20
Infrastructures facing climate change
Imen Makhlouf TC2.2, Tunisia

16:20-16:45
Resilience in earthworks
Enrico Mittiga, TC 4.3, Italy

16:45-17:15
Engagement for climat of Professional syndicat of earthworks of France
Patrick Boisson TC4.3 France

17:00-17:15
Decarbonization of rural roads
CHAIGNON François, France

17:15-17:25
Débat : Questions et réponses

17:25-17:30
Conclusions de la session

17:30-18:15
Round table: The future of rural roads and earth structures
Moderator: François Chaignon, TC2.2, France
Panelistes: Nazir Ali (President of PIARC), Slah Zouari (Ministry of Equipment and Housing, Tunisia), Andre Broto (strategic theme 2 - France), Souleiman Oussman (TC2.2 Burkina-Faso), Patrick Boisson (TC4.3, France)

18:15-18:30
Closing: TC2.2 & TC4.3 (Imen Makhlouf TC2.2 & Patrick Boisson TC4.3)

Day3: Friday, 05 May 2023

Site visit1- Earthworks
8:00-9:00
Transport from Tunis to Korbous
9:00-10:00
Presentation of the project

10:00-12:00
Technical visit1: Project of ´´Restoration of the RR128 Road Ain Actor – Korbous, in the Governorate of Nabeul
Technical visit2: Project of ´´Integrated project of opening up the Soualha, Ain Safra and Chaabnia Douars - Commune Balta Bouaouene (Jendouba)

12:00-13:00
Lunch
13:00-14:00
Bus from Korbous to Tunis
13:00-14:30
Bus from Jendouba to Tunis
**Location of the Seminar**

Hotel El Mouradi Gammarth: Les côtes de Carthage, La Marsa, Tunis, BP 597-2070, Gammarth, Tunisia - Telephone: +216 71 27 43 00 - https://goo.gl/maps/UbhBmpJRH6PE3SaQ9 - Website: www.elmouradi.com Email: sales1.gammarth@elmouradi.com

**Registration fees and Payment Method**

<table>
<thead>
<tr>
<th>The Seminar (Dinar Tunisien)</th>
<th>Before April 15th</th>
<th>High-income countries</th>
<th>350 €</th>
<th>By direct bank deposit to the account of the Tunisian Roads Association *</th>
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<tbody>
<tr>
<td></td>
<td>After April 15th</td>
<td>Middle- and low-income countries (Dinar Tunisien)</td>
<td>350 TND</td>
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<tr>
<td></td>
<td></td>
<td>High-income countries</td>
<td>400 €</td>
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<tr>
<td>Gala Dinner</td>
<td></td>
<td>High-income countries</td>
<td>60 €</td>
<td>By direct bank deposit or cash during the registration on the first day of seminar</td>
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<td></td>
<td></td>
<td>Middle- and low-income countries</td>
<td>120 TND</td>
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* ATR Bank: Banque Internationale Arabe de Tunisie - BIAT = - AGENCE LES BERGES DU LAC
IBAN International: TN59 0860 3000 1520 0905 8019
Code BIC: BIATTNTT

The registration will be validated upon receipt of the proof of payment to:

ATR: imenmakh@gmail.com
salouatriki@bte-ingenerie.com

**Accommodation**

El Mouradi Gammarth offers Superior* rooms for single use at the rate of 198 TND (incl. taxes) per day including breakfast.

Contacts details: Les côtes de Carthage, La Marsa, Tunis, BP 597-2070, Gammarth - +216 71 27 43 00 - W7CQ+G8 Marsa Email: sales1.gammarth@elmouradi.com

In addition, we offer you the following list of hotels located near the seminar venue:

<table>
<thead>
<tr>
<th>Hotel name</th>
<th>Contact details</th>
<th>Booking link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mövenpick Gammarth</td>
<td>B P 36, Av. Taieb Mhiri, 2078 la Marsa - +216 71 741444 - V8VC+X9 Marsa</td>
<td><a href="https://urlz.fr/kdTl">url</a></td>
</tr>
<tr>
<td>Le Palace Gammarth</td>
<td>Les cotes de Carthage, Gammarth +216 71 91 20 00 - W888+68 Gammarth</td>
<td><a href="https://urlz.fr/kdSc">url</a></td>
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<tr>
<td>Regency Gammarth</td>
<td>B.P 705 – 2078 Gammarth, Marsa 2013 - +216 71 91 09 00 - W7Q3+R2 Marsa</td>
<td><a href="https://urlz.fr/kdSN">url</a></td>
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<td>Ramada Plaza Gammarth</td>
<td>Les cotes de Carthage, Gammarth +216 71 911 100 , W7FH+WW Gammarth</td>
<td><a href="https://urlz.fr/kdSP">url</a></td>
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**Travel and transportation**

The capital Tunis is well linked to the rest of the world through the international airport Tunis - Carthage and the cab service in the capital is very affordable, the online cab order service is very common.

**Climate**

In Tunisia, May is known as a warm month. The average maximum daytime temperature in Tunis in May lies at 27.0°C (80.6°F). The average minimum temperature goes down to around 16.0°C (60.8°F) (often the minimum temperature is noted at night).

**Contact of Seminar’s Responsible:**

For further information or clarification about the seminar, please contact:

- Imen Makhlouf: imenmakh@gmail.com
- Kamel Zaghouani: k.zaghouani@terrasol.com.tn

**Organisation Committee**

PIARC
- Miguel Caso Florez
- Jeayoun Kim
- Imen Makhlouf

Seminar chairs
- Kamel Zaghouani

AIDA
- Aida Bergaoui
- Kaouther Machta
- Saloua Triki

ATR
- Ahmed Ksontini
- Mohamed Zmerli
- Eya Souab
- Imen Ben Hessine

**Scientific Committee**

TC2.2
- Souleman Oussman
- Imen Makhlouf
- Izak vander lande
- Francois Chaignon
- Paula Claytonsmit

TC4.3
- Patrick Boisson
- Kamel Zaghouani
- Yassmina Boussaif