



ISAP Day 7 Jan'18

ISAP Technical Committee APE **Asphalt Pavement & Environment**

Chairman: Manfred N. Partl (*EMPA & KTH*)

Co-Chair: Gabriele Tebaldi (*UNIV. PARMA & FLORIDA*)



<http://www.rknet.it/isap/>

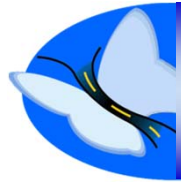
Annual Meeting 7th Jan 2018, Washington DC



General Info

- Established 2008, <http://www.rknet.it/isap/>
- Annual Meetings at TRB (ISAP Day)
- Sister of ISAP TC's:
 - Constitutive Modeling (*T. Scarpas, TU Delft*)
 - Pavem. Field Eval. (*E. Dave, Univ. New Hampshire*)
- **Organization**
 - Chair: Manfred N. Partl (*Empa & KTH*)
 - Secr.: Gabriele Tebaldi (*Univ. Parma & Florida*)
 - Actual Working Groups: **7**

The screenshot shows the website for the ISAP Technical Committee Asphalt Pavements & Environment. The header includes the title and navigation links: Home, TC Goals, Work Groups, Documents, Forum, News Archive, Gallery, Site map, and TC Board. The main content area features the ISAP logo and the TC APE logo. Text on the page describes the committee's focus on environmental issues and sustainable development in asphalt pavement technology. It mentions the 47th ISAP Annual Meeting in Zurich (2008) and the formation of the TC APE. A login form is visible on the right side of the page.



Goals of ISAP TC APE (1)

- Find new solutions and new techniques to improve the **environmental compatibility** of asphalt pavements
- Find new solutions & new techniques for asphalt pavements to **improve environment** (e.g. multi-functionality)
- Promote safe & beneficial **re-use of secondary material** in asphalt (e.g. shingles, other selected waste)
- Promote safe & beneficial **use of marginal materials** in asphalt
- Understand & handle interaction **mechanisms** of material and environment during production, construction, use & demolition!!
⇒ Links to RILEM TC's CBE, CHA, PIM, WMR, 264-RAP, 252-CMB



Goals of ISAP TC APE (2)

- Understand & handle effect of environmental changes on changing **materials properties** in terms
 - aging: durability, maturing, degrading, rejuvenating
 - environmental & load effects: healing, damaging,
- **Holistic approach**: Improve the state of practice of LCA for enhancing the environmental sustainability of asphalt pavements
- Promote **recycling-asphalt** as sustainable material of high value by considering technical, environmental & economical aspects.
- Find new solutions & new techniques for **resilient asphalt pavements** enduring extreme climatic & weather changes

General Action/Activity List

- Care for internat. discussion, standardization, research directions & professional formation through **dissemination**

- APE Symposia ca. every 3-4 years,
- Special APE sponsored sessions during ISAP and other Conferences,
- Workshops in connection with partners,
- Web, Webinars
- Publications (Journal Papers, STAR)
- Alliances with AAPT, RILEM, EATA...



20th -21st
Nov 2017

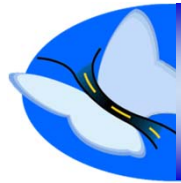


19th -22th Jun. 2018



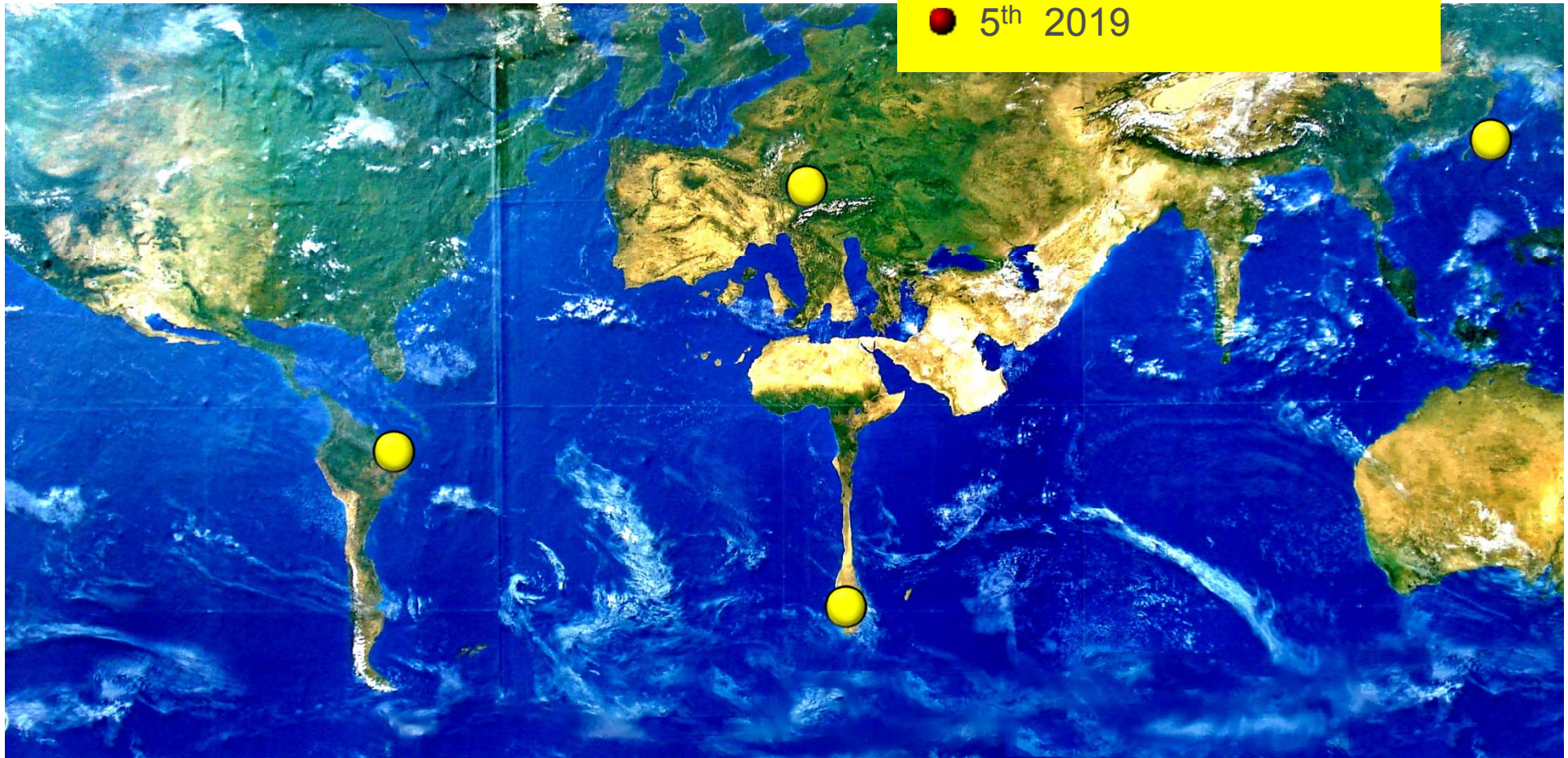
3rd -5th Jun. 2019





Symposia

- 1st 2008 Zurich
- 2nd 2012 Fortaleza
- 3rd 2015 Sun City
- 4th 2017 Tokyo
- 5th 2019



Food Consumption of Countries



Working Groups

WG 1 Hot Recycling of RAP

Chair: **E. Hajj** (*U. Nevada*)

WG 2 Cold Recycling of RAP

Chair: **K. Jenkins** (*U. Stellenbosch*), Secr: **A. Marradi** (*U. Pisa*)

WG 3 Life Cycle Assessment

Chair: **J. Harvey** (*U. California, Davis*)

WG 4 New Techn. & Special Environm. Aspects on Asphalt Pavmts.

Chair: **G. Airey** (*U. Nottingham*), Secr: **E. Fini** (*NC A&T State U.*)

WG 5 Shingle Recycling

Chair: **G. Huber** (*Heritage Research Group*)

WG 6 By-products & Secondary Materials Recycling in Asphalt Pavement

Chair: **M. Pasetto** (*U. Padova*), Secr: **A. Cannone Falchetto** (*TU Braunschweig*)

WG 7 Energy Harvesting

Chair: **W. Lee** (*U. Rhode Island*), Vice Chair: **R. Mallick** (*WPI*),
Secr: **L. Wang** (*Virginia Tech*)



Reorganization (17thSept'17)

(1)

Situation 10-years review:

- Most WGs did **not fulfill** our expectations as formulated in the individual strategic plans.
- Some of them were in fact **hibernating** over years.
- Activities remained with the chairs and the **group effect** was very limited.
- Tasks/Portfolios were **unevenly** distributed
- WG system proved **not flexible** enough to incorporate new APE relevant developments (resilient pavem, all-weather constr,..)
- Hence, we decided to **reorganize** and reduce to the max as follows:



Reorganization (17th Sept'17)

(2)

Decisions

- 1) **Dissolve** the working groups.
- 2) **Flat Organ**: Compose TC of core members CM, responsible for specific topics/tasks/regions (short or long term, through voluntary commitment)
- 3) Consider these members **Topic Delegates** of TC APE (old WG chairs etc),
→ e.g. delegates for RAP, LCA, etc.; for Asia, Africa etc.; for APE symposium; and even for others (like website, etc)
- 4) **Flexibility**: Allow new delegates as CM of the TC whenever interest and individual commitment arises and the TC approves (everything is voluntary)



Reorganization (17thSept'17)

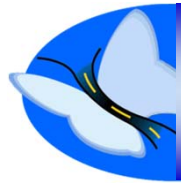
(3)

Advantages for the delegates?

- **Backing** their activities in their field of delegation by a well-recognized organization
- Increase of individual **visibility** by representing the TC in their field of delegation
- Professional advice & support when **organizing activities** in their field of delegation (e.g. advertisement of workshops, symposia, edu. activities)

Task of those delegates?

- Participation at **TC meetings** (annual meetg. + quarterly skype)
- Organizing at least **one activity** in their field of delegation (webinar, symposium, workshop, proposal for presentation during ISAP day, ...)
- Short **annual report** on their & other activities in their field of delegation
- Delegates may form **topic-groups** under their leadership, if convenient (like old task groups)



Activities Outlook 2018

Outlook:

- **Planning ISAP 5nd APE Symposium 2019**- December, 2019
Call has to be renewed!
India (Murali Krishnan, Madras) in connection with the conference of the Transportation Research Group of India (TRG)
- Working on the possibility to organize a **workshop as a collateral event of next CAPSA** in South Africa (location has to be defined).
- **Special Session of APE during ISAP 2018** in Fortaleza
- **Other events** that are in planning but yet uncertain
- **Implementation of reorganization** of TC APE



Technical Presentations

Report of 4th APE Symposium in Tokyo

Shigeru Shimenu, Nippon Expressway Research Institute, Japan

In field performance of cold recycled mixtures

Alessandro Marradi, University of Pisa, Italy

Aging and performances of warm asphalt mixtures

Christiane Raab, EMPA, Switzerland

Mortar approach to characterize the effect of RAP and RAS on virgin binder

Yu Yan, University of Florida, United States

Mix design for hot recycling of RAP

Martins Zaumanis, Worcester Polytechnic Institute, Latvia