

## University of São Paulo

São Paulo, São Paulo, Brazil

(update on May/2008)



### Pavements Mechanics Laboratory School of Engineering



#### Program description

The Department of Transportation Engineering is located at the Civil Engineering building at the main university campus in Sao Paulo, the state capital. The Civil Engineering program is one of the leading courses in the country teaching for both undergraduate and graduate levels. The Pavements Mechanics Laboratory (LMP) is subordinated to the Transportation Engineering department and was founded in 1997. The research activities in concrete pavements field is shared with the Civil Construction Engineering department where matters concerning concrete technology are developed by recognized experts in Brazil. The program offers full laboratory facilities

for mixing and preparing concrete as well as for conventional and advanced tests for concrete pavements materials. Research facilities include also several full-scale concrete slabs sections tests for analyzing temperatures, strains and functional and structural behavior of concrete slabs. Currently several studies on recycled aggregates for roller compacted concrete are under course in connection to numerical analysis of composite and insulated pavements.

#### Faculty and selected projects

Dr. José Tadeu Balbo ([jotbalbo@usp.br](mailto:jotbalbo@usp.br)) (ISCP member)

- Field structural performance of ultra thin whitetopping
- Tropical (hot-wet) climate effects on concrete slab curling
- Fatigue and other structural issues for concrete mixtures with recycled aggregates

Dr. Antonio Domingues de Figueiredo ([antonio.figueiredo@poli.usp.br](mailto:antonio.figueiredo@poli.usp.br))

- Fiber reinforced concrete technology
- Mix-design analysis of concretes
- Quality control programs for concrete



#### Facilities

The School of Engineering makes available huge laboratories installations for materials characterization and full instrumented experimental concrete slabs for loads and temperature tests. Equipments for evaluation of roads and airfields functional performance, like laser profilometer and line-scan digital assessment of pavement distresses were developed under the coordination of the LMP and are available for in field researches. The LMP is also responsible for dissemination of HDM-4 model (accredited by PIARC).

#### Links

Pavements Mechanics Laboratory: [www.ptr.poli.usp.br/lmp](http://www.ptr.poli.usp.br/lmp)

School of Engineering: [www.poli.usp.br/](http://www.poli.usp.br/)

Brazilian Concrete Institute: [www.ibracon.org.br/](http://www.ibracon.org.br/)