

# Bachelor project in Civil Engineering

## Unravelling statistical relationships from tests on asphalt cores



We are looking for:

**Someone able to conduct SEM analysis on a data set of approx. 750 items**  
(10-15 variables; no missing values).

In a controlled experiment approximately 750 asphalt cores were fabricated varying the production procedure. These cores were measured and tested for ca. 5 key characteristics. Excel is applied for exploratory statistics as means, spread etc.

Various experiments were conducted in the laboratory varying the asphalt temperature during compaction and varying the equipment used to compact two different asphalt mixtures. From the 750 cores the density and the Indirect Tensile Strength (an indicator for the resistance against cracking) were determined. There is still much variability within and between various slabs. On the results of these **approximately 750 asphalt cores, several confirmatory, regression and path analyses should be performed.**

To support us in performing the statistical analyses, we are looking for interested and enthusiastic students with a background in statistics (structural equation modeling). Possible software programs to perform these analyses are M-plus and AMOS (or other suitable software). If you are interested or know somebody who might be interested, please contact Dr. ir. Seirgei Miller ([s.r.miller@uwtente.nl](mailto:s.r.miller@uwtente.nl)) at the Horsttoren Room 405 or Prof. Andre Dorée ([a.g.doree@utwente.nl](mailto:a.g.doree@utwente.nl)) directly by email. General information about other ASPARi projects can be found at [www.aspari.nl](http://www.aspari.nl). We look forward to hearing from you.

Supervision UT: André Dorée, Seirgei Miller

Language: English or Dutch