

## Ecole d'automne du GdR MBS

Mise au point d'une solution innovante de revêtements drainants et à effet rafraichissant

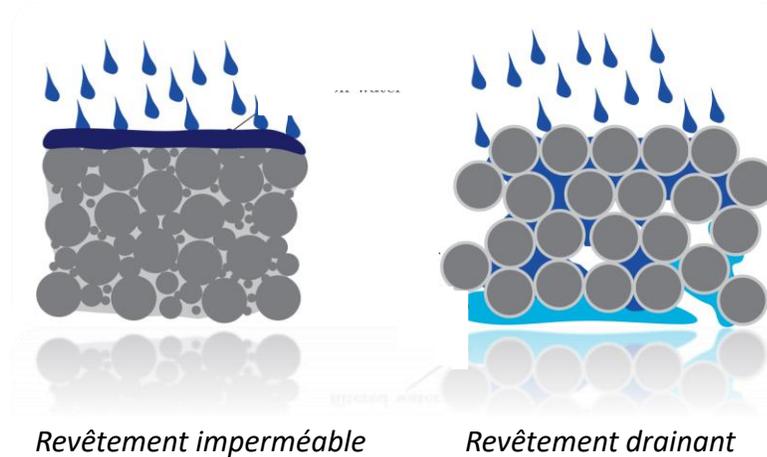
Doctorant :

Khaled SEIFEDDINE

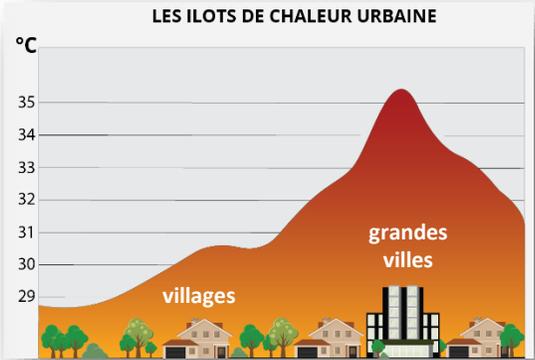
Encadré par :

Pr. Evelyne TOUSSAINT

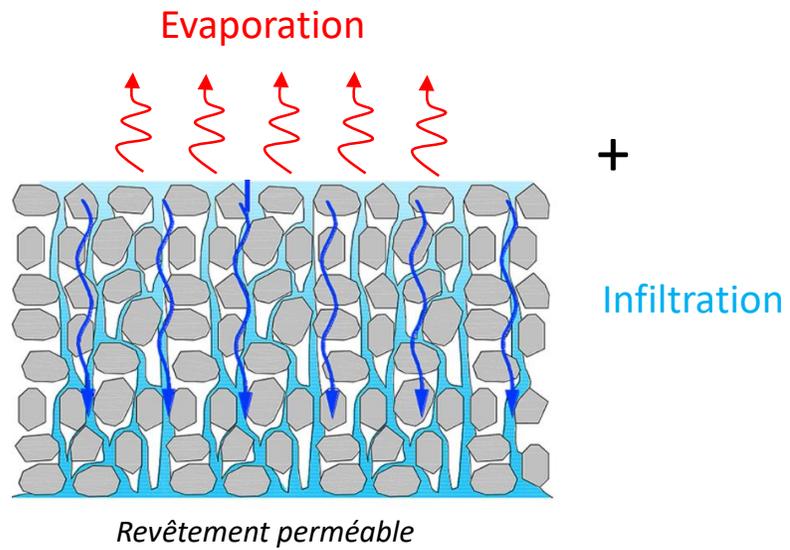
Pr. Sofiane AMZIANE



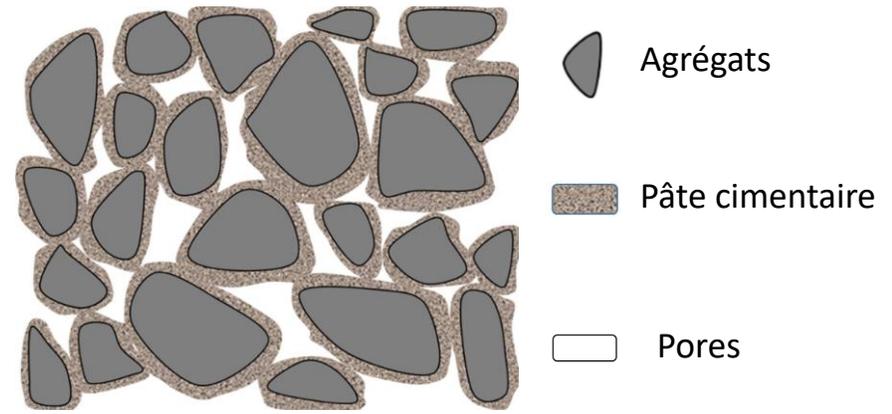
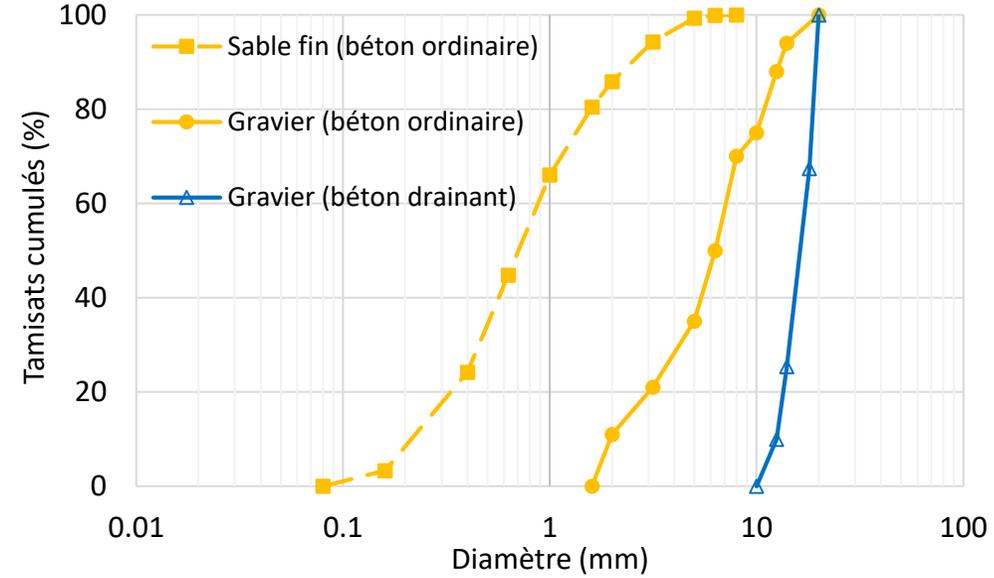
# 1. Problématiques et objectifs



Solution

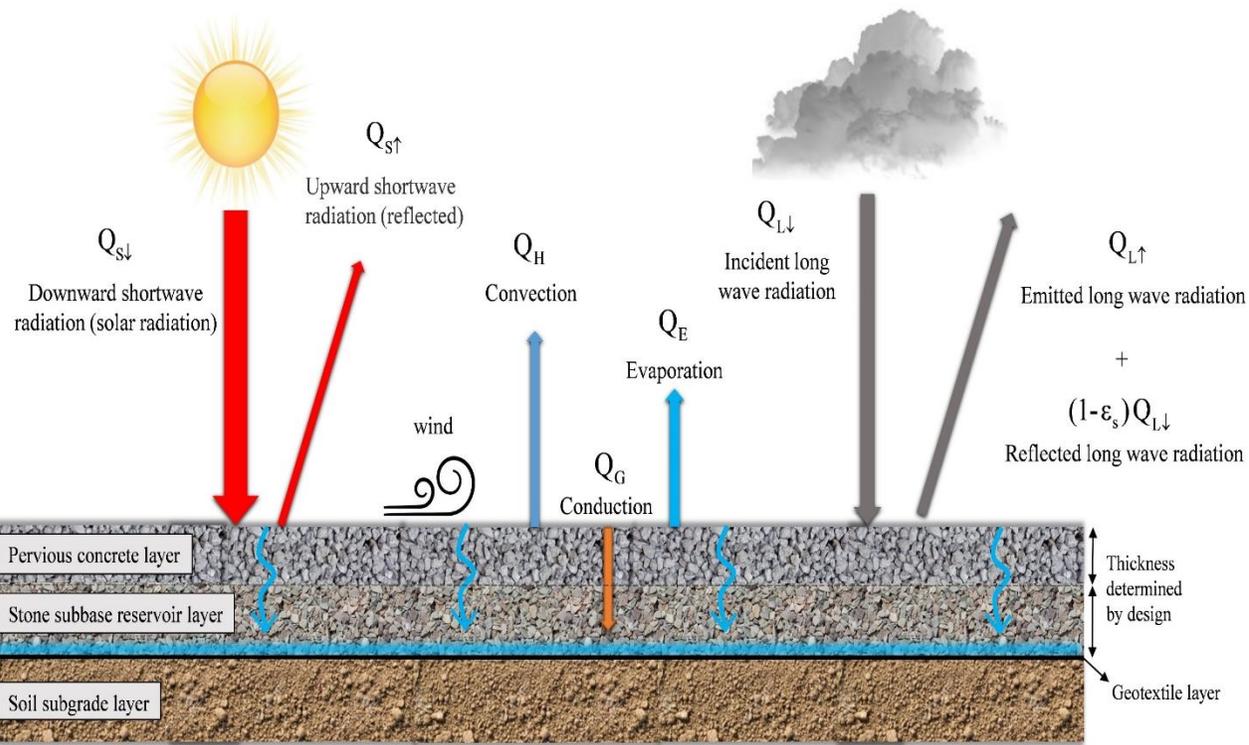


# 2. Matériau étudié



Composition du béton drainant

### 3. Bilan énergétique à la surface d'une chaussée (Modèle)

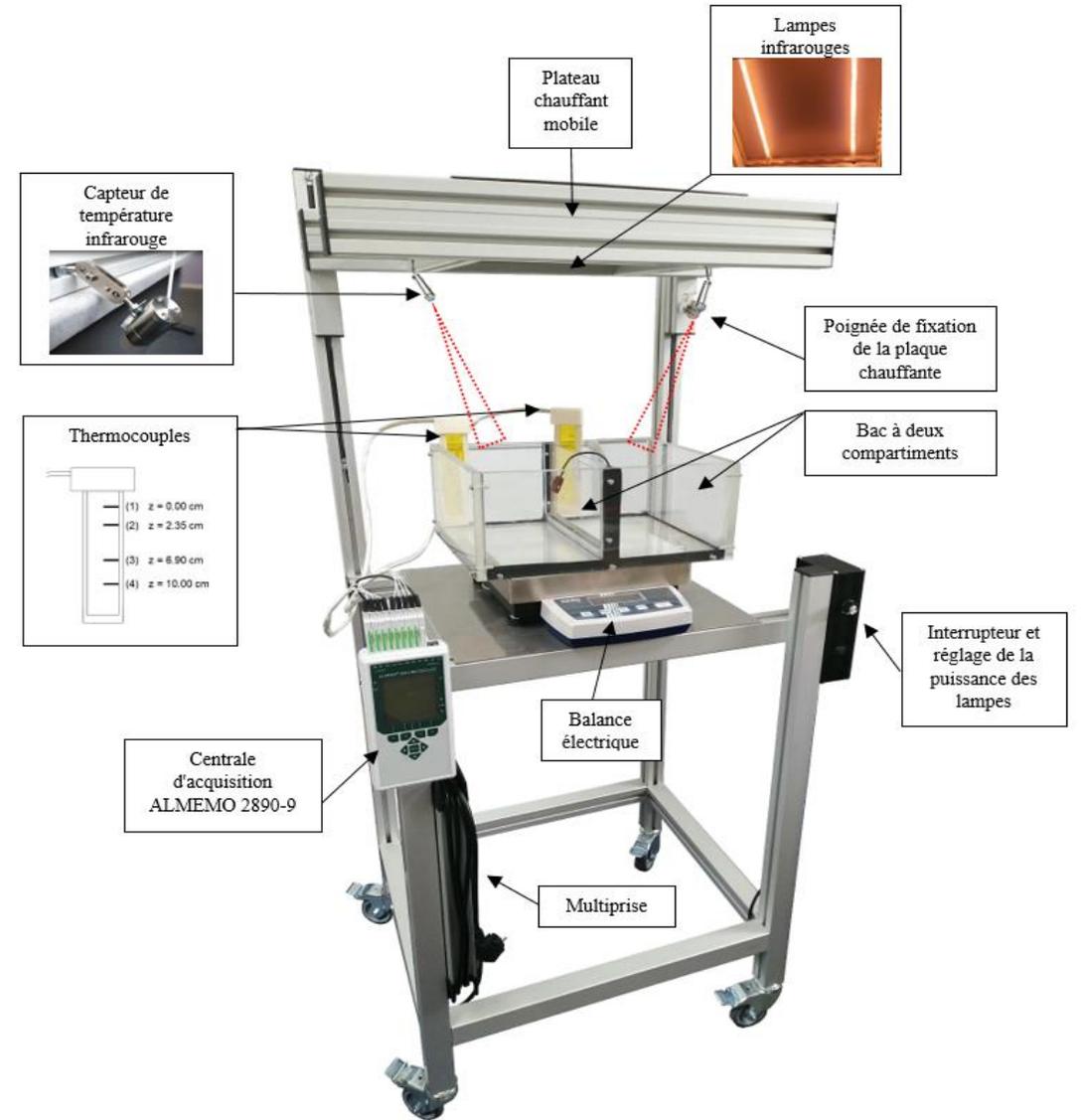


$$Q_{S\downarrow} + Q_{L\downarrow} = Q_{S\uparrow} + Q_{L\uparrow} + (1 - \epsilon_s)Q_{L\downarrow} + Q_H + Q_E + Q_G$$



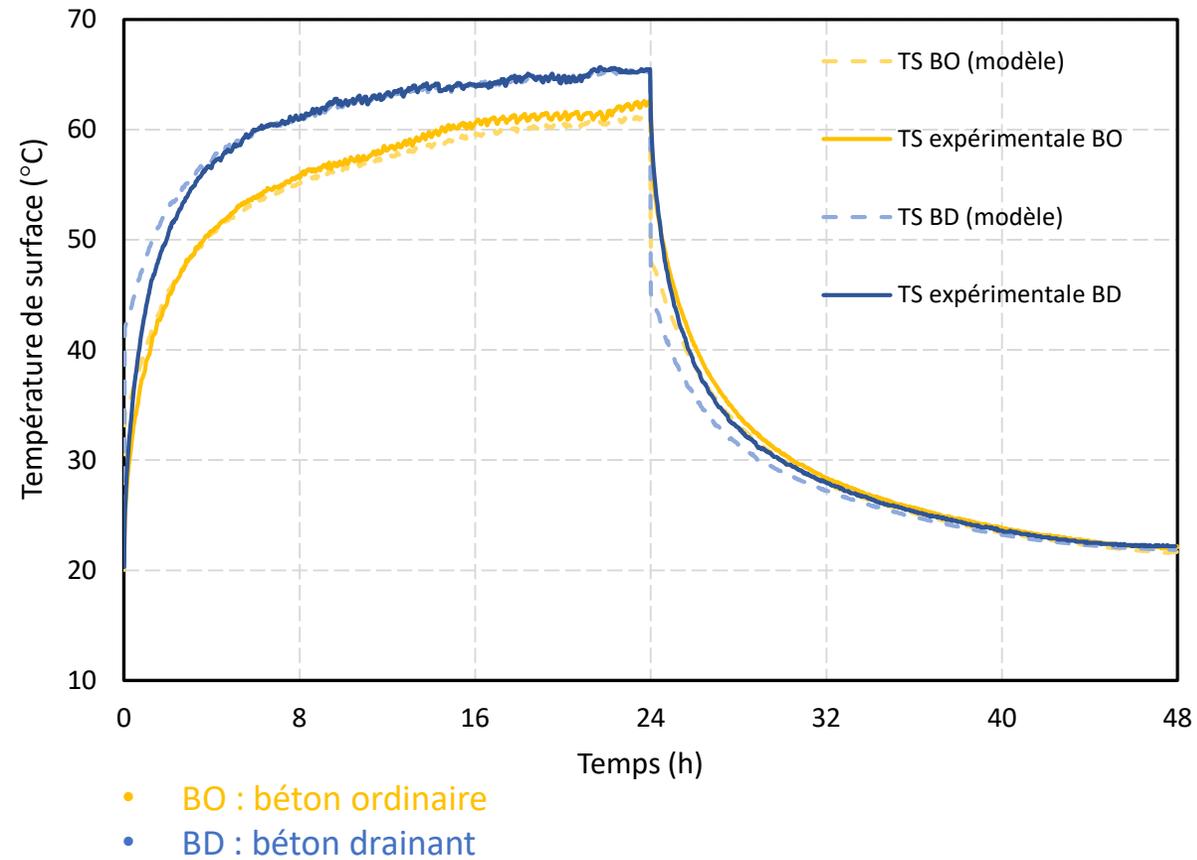
$$Q_{S\downarrow} + Q_{L\downarrow} = \alpha Q_{S\downarrow} + (1 - \epsilon_s)Q_{L\downarrow} + \sigma \epsilon_s (T_s + 273,15)^4 + h_c (T_s - T_a) + L \cdot ER - \lambda_{\text{pavement}} \left( \frac{\partial T_z}{\partial z} \right)_{z=0}$$

### 4. Banc expérimental pour étudier le comportement thermique du béton drainant



## 5. Résultats et analyse

### 1) En condition sèche



### 2) En condition humide

