

**Participants:**

- Patrick Dangla
- Ravi Patel
- Bruno Huet

**Organization of the group :**

- Chaiman : C. Gehlen and B. Huet
- List of participants: under completion
- List of tools: under completion
- Exchange of data/documents: dropbox folder ([RILEM TC CCC - WG3](#))

**Brainstorm on possible objectives:**

1. Collect experimental evidence:
  - a. Properties of interest
  - b. Global experiments on carbonation rate (carbonation depth(pH), carbonation profile, water content profile for different mixes and environmental conditions
  - c. Share/collect data
  - d. Also collect unanswered questions and formulate hypothesis
2. Review modeling strategies from continuum models to engineering models
  - a. Mathematical background and hypostasis for transforming PDEs into ODEs
3. Benchmark of existing tools:
  - a. Eng. Vs Eng. Tools
  - b. Continuum tools one versus eachother
  - c. Eng. Vs continuum to check contribution of boundary conditions on carbonation depth over time
4. Improvement of models:
  - a. Engineering model
    - i. Extension of front tracking models to properties variable in space and time
    - ii. Mutliple front tracking (water, CO2) ?
  - b. Continnum models
    - i. Include better intrinsic kinetic model fitted on experimental data decoupled from transport
    - ii. Variable boundary conditions to account for real climates (RH, T)
    - iii. Resolve pH/calcite front
5. Remarks:
  - a. Corrosion models are intended to a part of working group on corrosion

- b. The degree of knowledge on carbonation of AAM is not sufficient to foresee models on the same basis as the one for OPC based systems

**Next steps**

- Form the group of partners (RILEM members) that would be willing to participate. Many of them were not attending this first event. Send out invitations.
- Collect information on tools/models that could be used
- Find a way to collect/capitalize basic properties and global behavior