

C. Romero Rodriguez
Materials and Environment

Employment

Research output

Modelling of capillary water absorption in sound and cracked concrete using a dual-lattice approach: Computational aspects

Singla, A., Šavija, B., Sluys, L. J. & Romero Rodriguez, C., 2022, In: Construction and Building Materials. 320, p. 1-17 17 p., 125826.

Plutonic Rocks as Protection Layers to Concrete Exposed to Ultra-High Temperature

França de Mendonça Filho, F., Romero Rodriguez, C., Schlangen, E. & Copuroglu, O., 2022, In: Materials. 15, 10, 16 p., 3490.

Surface effects of molten slag spills on calcium aluminate cement paste

Mendonça Filho, F. F., Rodriguez, C. R., Schlangen, E. & Copuroglu, O., 2022, In: Materials & Design. 217, p. 1-13 13 p., 110623.

Characterization of air-void systems in 3D printed cementitious materials using optical image scanning and X-ray computed tomography

Chen, Y., Çopuroğlu, O., Romero Rodriguez, C., França de Mendonça Filho, F. & Schlangen, E., Mar 2021, In: Materials Characterization. 173, p. 1-18 18 p., 110948.

Accelerated carbonation of ordinary Portland cement paste and its effects on microstructure and transport properties

Romero Rodriguez, C., Ye, R., Varveri, A., Rossi, E., Anglani, G., Antonaci, P., Schlangen, E. & Šavija, B., 2021, *4th International Rilem Conference on Microstructure Related Durability of Cementitious Composites: Microdurability 2020*. Ye, G., Dong, H., Liu, J., Schlangen, E. & Miao, C. (eds.). Delft University of Technology, p. 902-906 5 p.

Assessing strain rate sensitivity of cement paste at the micro-scale through micro-cantilever testing

Gan, Y., Rodriguez, C. R., Schlangen, E., van Breugel, K. & Šavija, B., 2021, In: Cement and Concrete Composites. 121, p. 1-12 12 p., 104084.

Assessment of the self-healing capacity of cementitious materials through active thin sections

Rossi, E., Romero Rodriguez, C., Jonkers, H. & Çopuroğlu, O., 2021, In: Journal of Microscopy. 286, 2, p. 58-62 5 p.

Modeling of microstructural effects on the creep of hardened cement paste using an experimentally informed lattice model

Gan, Y., Romero Rodriguez, C., Zhang, H., Schlangen, E., van Breugel, K. & Šavija, B., 2021, In: Computer-Aided Civil and Infrastructure Engineering. 36, 5, p. 560-576 17 p.

Chemo-physico-mechanical properties of the interface zone between bacterial PLA self-healing capsules and cement paste

Romero Rodriguez, C., França de Mendonça Filho, F., Mercuri, L., Gan, Y., Rossi, E., Anglani, G., Antonaci, P., Schlangen, E. & Šavija, B., 2020, In: Cement and Concrete Research. 138, 17 p., 106228.

Effect of different grade levels of calcined clays on fresh and hardened properties of ternary-blended cementitious materials for 3D printing

Chen, Y., Romero Rodriguez, C., Li, Z., Chen, B., Copuroglu, O. & Schlangen, E., 2020, In: Cement and Concrete Composites. 114, 20 p., 103708.

Effect of printing parameters on interlayer bond strength of 3D printed limestone-calcined clay-based cementitious materials: An experimental and numerical study

Chen, Y., Jansen, K., Zhang, H., Romero Rodriguez, C., Gan, Y., Çopuroğlu, O. & Schlangen, E., 2020, In: Construction and Building Materials. 262, 19 p., 120094.

Elucidating the effect of accelerated carbonation on porosity and mechanical properties of hydrated Portland cement paste using X-ray tomography and advanced micromechanical testing

Zhang, H., Rodriguez, C. R., Dong, H., Gan, Y., Schlangen, E. & Šavija, B., 2020, In: *Micromachines*. 11, 5, 14 p., 471.

Fundamental investigation on the frost resistance of mortar with microencapsulated phase change materials

Romero Rodríguez, C., França de Mendonça Filho, F., Chaves Figueiredo, S., Schlangen, E. & Šavija, B., 2020, In: *Cement and Concrete Composites*. 113, 12 p., 103705.

Influence of SiO₂, TiO₂ and Fe₂O₃ nanoparticles on the properties of fly ash blended cement mortars

Siang Ng, D., Paul, S. C., Anggraini, V., Kong, S. Y., Qureshi, T. S., Rodriguez, C. R., Liu, Q. F. & Šavija, B., 2020, In: *Construction and Building Materials*. 258, 11 p., 119627.

Mechanical behavior of printed strain hardening cementitious composites

Figueiredo, S. C., Rodríguez, C. R., Ahmed, Z. Y., Bos, D. H., Xu, Y., Salet, T. M., Çopuroglu, O., Schlangen, E. & Bos, F. P., 2020, In: *Materials*. 13, 10, 23 p., 2253.

X-Ray Micro Tomography of Water Absorption by Superabsorbent Polymers in Mortar

Rodriguez, C. R., Deprez, M., de Mendonca Filho, F. F., van Offenwert, S., Cnudde, V., Schlangen, E. & Šavija, B., 2020, *SAP 2019: 3rd International Conference on the Application of Superabsorbent Polymers (SAP) and Other New Admixtures Towards Smart Concrete*. Boshoff, W. P., Mechtcherine, V., Combrinck, R. & Wyrzykowski, M. (eds.). Springer, Vol. 24. p. 29-37 9 p. (RILEM Bookseries; vol. 24).

3D Concrete Printing for Structural Applications

Bos, F., Ahmed, Z. Y., Romero Rodriguez, C. & Chaves Figueiredo, S., 2019, In: *Spool*. 6, 2 #5, p. 5-10 6 p.

An approach to develop printable strain hardening cementitious composites

Chaves Figueiredo, S., Romero Rodríguez, C., Ahmed, Z. Y., Bos, D. H., Xu, Y., Salet, T. M., Çopuroğlu, O., Schlangen, E. & Bos, F. P., 2019, In: *Materials and Design*. 169, 107651.

Frost Damage Progression Studied Through X-Ray tomography In Mortar With Phase Change Materials

Romero Rodriguez, C., Chaves Figueiredo, S., França de Mendonça Filho, F., Schlangen, E. & Šavija, B., 2019, *Proceedings of the 10th International Conference on Fracture Mechanics of Concrete and Concrete Structures*. Pijaudier-Cabot, G., Grassl, P. & La Borderie, C. (eds.). 8 p.

Numerical investigation of crack self-sealing in cement-based composites with superabsorbent polymers

Rodríguez, C. R., Figueiredo, S. C., Deprez, M., Snoeck, D., Schlangen, E. & Šavija, B., 2019, In: *Cement and Concrete Composites*. 104, 12 p., 103395.

On The Role Of Soft Inclusions On The Fracture Behaviour Of Cement Paste

Mercuri, L., Romero Rodriguez, C., Xu, Y., Chaves Figueiredo, S., Mors, R., Rossi, E., Anglani, G., Antonaci, P., Šavija, B. & Schlangen, E., 2019, *Proceedings of the 10th International Conference on Fracture Mechanics of Concrete and Concrete Structures*. Pijaudier-Cabot, G., Grassl, P. & La Borderie, C. (eds.). 8 p.

Modeling water absorption in cement-based composites with SAP additions

Romero Rodriguez, C., Chaves Figueiredo, S., Schlangen, E. & Snoeck, D., 26 Feb 2018, *Computational Modelling of Concrete Structures: Proceedings of the Conference on Computational Modelling of Concrete and Concrete Structures*. Meschke, G., Pichler, B. & Rots, J. G. (eds.). CRC Press, p. 295-304

Modelling strategies for the study of crack self-sealing in mortar with superabsorbent polymers

Romero Rodriguez, C., Chaves Figueiredo, S., Snoeck, D., Šavija, B. & Schlangen, E., 2018, *Proceedings of the Symposium on Concrete Modelling: CONMOD2018 27-30 August 2018 – Delft, Netherlands*. Schlangen, E., de Schutter, G., Šavija, B., Zhang, H. & Romero Rodriguez, C. (eds.). Rilem, Vol. PRO 127. p. 333-341 (Rilem proceedings; no. PRO 127).

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Schlangen, E. (ed.), De Schutter, G. (ed.), Šavija, B. (ed.), Zhang, H. (ed.) & Romero Rodriguez, C. (ed.), 2018, Delft: RILEM Publications S.A.R.L. 520 p. (RILEM proceedings; vol. PRO 127)

Induction healing of concrete reinforced by bitumen-coated steel fibres

Romero Rodriguez, C., Chaves Figueiredo, S., Chiaia, B. & Schlangen, E., 2016, *9th International Conference on Fracture Mechanics of Concrete and Concrete Structures: Berkeley, California USA*. Saouma, V., Bolander, J. & Landis, E. (eds.). 8 p.

Activities

4th International Conference on ServiceLife Design for Infrastructures (Event)

Guang Ye (Editor), Claudia Romero Rodriguez (Editor), Hongzhi Zhang (Editor) & Branko Šavija (Editor)
27 Aug 2018 → 30 Aug 2018