

# Freek Bos

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

38  
papers

2,263  
citations

19  
h-index

40  
g-index

40  
ext. papers

3,146  
ext. citations

6.1  
avg, IF

5.97  
L-index

| #  | Paper  | IF   | Citations |
|----|--|------|-----------|
| 38 | Additive manufacturing of concrete in construction: potentials and challenges of 3D concrete printing. <i>Virtual and Physical Prototyping</i> , <b>2016</b> , 11, 209-225                               | 10.1 | 450       |
| 37 | Early age mechanical behaviour of 3D printed concrete: Numerical modelling and experimental testing. <i>Cement and Concrete Research</i> , <b>2018</b> , 106, 103-116                                    | 10.3 | 290       |
| 36 | Hardened properties of 3D printed concrete: The influence of process parameters on interlayer adhesion. <i>Cement and Concrete Research</i> , <b>2019</b> , 119, 132-140                                 | 10.3 | 185       |
| 35 | Digital Concrete: A Review. <i>Cement and Concrete Research</i> , <b>2019</b> , 123, 105780  | 10.3 | 157       |
| 34 | Rethinking reinforcement for digital fabrication with concrete. <i>Cement and Concrete Research</i> , <b>2018</b> , 112, 111-121   | 10.3 | 156       |
| 33 | Extrusion-based additive manufacturing with cement-based materials [Production steps, processes, and their underlying physics: A review. <i>Cement and Concrete Research</i> , <b>2020</b> , 132, 106037 | 10.3 | 135       |
| 32 | Design of a 3D printed concrete bridge by testing. <i>Virtual and Physical Prototyping</i> , <b>2018</b> , 13, 222-236   | 10.1 | 125       |
| 31 | Experimental Exploration of Metal Cable as Reinforcement in 3D Printed Concrete. <i>Materials</i> , <b>2017</b> , 10,  | 3.5  | 94        |
| 30 | A process classification framework for defining and describing Digital Fabrication with Concrete. <i>Cement and Concrete Research</i> , <b>2020</b> , 134, 106068  | 10.3 | 71        |
| 29 | On the emergence of 3D printable Engineered, Strain Hardening Cementitious Composites (ECC/SHCC). <i>Cement and Concrete Research</i> , <b>2020</b> , 132, 106038  | 10.3 | 70        |
| 28 | Triaxial compression testing on early age concrete for numerical analysis of 3D concrete printing. <i>Cement and Concrete Composites</i> , <b>2019</b> , 104, 103344                                     | 8.6  | 69        |
| 27 | An approach to develop printable strain hardening cementitious composites. <i>Materials and Design</i> , <b>2019</b> , 169, 107651   | 8.1  | 69        |
| 26 | Ductility of 3D printed concrete reinforced with short straight steel fibers. <i>Virtual and Physical Prototyping</i> , <b>2019</b> , 14, 160-174  | 10.1 | 69        |
| 25 | Opportunities and challenges for structural engineering of digitally fabricated concrete. <i>Cement and Concrete Research</i> , <b>2020</b> , 133, 106079  | 10.3 | 53        |
| 24 | Correlation between destructive compression tests and non-destructive ultrasonic measurements on early age 3D printed concrete. <i>Construction and Building Materials</i> , <b>2018</b> , 181, 447-454  | 6.7  | 48        |
| 23 | Integrating reinforcement in digital fabrication with concrete: A review and classification framework. <i>Cement and Concrete Composites</i> , <b>2021</b> , 119, 103964                                 | 8.6  | 35        |
| 22 | 3D Printing Concrete on temporary surfaces: The design and fabrication of a concrete shell structure. <i>Automation in Construction</i> , <b>2018</b> , 94, 395-404                                      | 9.6  | 32        |

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| 21 | 3D Printing Concrete with Reinforcement <b>2018</b> , 2484-2493   |      | 31 |
| 20 | Juxtaposing fresh material characterisation methods for buildability assessment of 3D printable cementitious mortars. <i>Cement and Concrete Composites</i> , <b>2021</b> , 120, 104024     | 8.6  | 19 |
| 19 | The realities of additively manufactured concrete structures in practice. <i>Cement and Concrete Research</i> , <b>2022</b> , 156, 106746   | 10.3 | 14 |
| 18 | A Real-Time Height Measurement and Feedback System for 3D Concrete Printing <b>2018</b> , 2474-2483   |      | 13 |
| 17 | On-demand additive manufacturing of functionally graded concrete. <i>Virtual and Physical Prototyping</i> , <b>2020</b> , 15, 194-210   | 10.1 | 12 |
| 16 | Mechanical Behavior of Printed Strain Hardening Cementitious Composites. <i>Materials</i> , <b>2020</b> , 13,   | 3.5  | 11 |
| 15 | Large Scale Testing of Digitally Fabricated Concrete (DFC) Elements. <i>RILEM Bookseries</i> , <b>2019</b> , 129-147  | 0.5  | 11 |
| 14 | Bending and Pull-Out Tests on a Novel Screw Type Reinforcement for Extrusion-Based 3D Printed Concrete. <i>RILEM Bookseries</i> , <b>2020</b> , 632-645                                     | 0.5  | 10 |
| 13 | Complex Architecture in Printed Concrete: The Case of the Innsbruck University 350th Anniversary Pavilion COHESION. <i>RILEM Bookseries</i> , <b>2020</b> , 1116-1127                       | 0.5  | 7  |
| 12 | Bond of Reinforcement Cable in 3D Printed Concrete. <i>RILEM Bookseries</i> , <b>2020</b> , 584-600   | 0.5  | 6  |
| 11 | Design and analyses of printable strain hardening cementitious composites with optimized particle size distribution. <i>Construction and Building Materials</i> , <b>2022</b> , 324, 126411 | 6.7  | 3  |
| 10 | A roadmap for quality control of hardening and hardened printed concrete. <i>Cement and Concrete Research</i> , <b>2022</b> , 157, 106800   | 10.3 | 3  |
| 9  | Digital Fabrication with Cement-Based Materials: Underlying Physics. <i>RILEM State-of-the-Art Reports</i> , <b>2022</b> , 49-98  | 1.3  | 2  |
| 8  | The influence of material temperature on the in-print strength and stability of a 3D print mortar <b>2019</b> , 425-430   |      | 2  |
| 7  | Quality Assessment of Printable Strain Hardening Cementitious Composites Manufactured in Two Different Printing Facilities. <i>RILEM Bookseries</i> , <b>2020</b> , 824-838                 | 0.5  | 2  |
| 6  | Structural Design and Testing of Digitally Manufactured Concrete Structures. <i>RILEM State-of-the-Art Reports</i> , <b>2022</b> , 187-222  | 1.3  | 1  |
| 5  | Digital Fabrication with Cement-Based Materials: Process Classification and Case Studies. <i>RILEM State-of-the-Art Reports</i> , <b>2022</b> , 11-48                                       | 1.3  | 1  |
| 4  | 3D Concrete Printing - Free Form Geometries with Improved Ductility and Strength. <i>RILEM Bookseries</i> , <b>2020</b> , 741-756   | 0.5  | 1  |

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| 3 | Edge strength of core drilled and waterjet cut holes in architectural glass. <i>Glass Structures and Engineering</i> , <b>2021</b> , 6, 131-145                            | 1.4 | 1 |
| 2 | Robotically Placed Reinforcement Using the Automated Screwing Device [An Application Perspective for 3D Concrete Printing. <i>RILEM Bookseries</i> , <b>2022</b> , 417-423 | 0.5 | 0 |
| 1 | Consistency of Mechanical Properties of 3D Printed Strain Hardening Cementitious Composites Within One Printing System. <i>RILEM Bookseries</i> , <b>2022</b> , 145-151    | 0.5 |   |