# Philippe Block

List of Publications by Year
in descending order

| 43 papers | 1,232 citations | 516710<br>16 h-index | 377865<br>34 g-index |
|---|---|---|---|
| 44 all docs | 44 docs citations | 44 times ranked | 709 citing authors |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 1 | Coupled Rigid-Block Analysis: Stability-Aware Design of Complex Discrete-Element Assemblies. CAD Computer Aided Design, 2022, 146, 103216. | 2.7 | 8 |
| 2 | Challenges and Opportunities in Scaling up Architectural Applications of Mycelium-Based Materials with Digital Fabrication. Biomimetics, 2022, 7, 44. | 3.3 | 24 |
| 3 | The Striatus bridge. Architecture, Structures and Construction, 2022, 2, 521-543. | 1.5 | 17 |
| 4 | Structural design, digital fabrication and construction of the cable-net and knitted formwork of the KnitCandela concrete shell. Structures, 2021, 31, 1287-1299. | 3.6 | 51 |
| 5 | Numerical limit analysis-based modelling of masonry structures subjected to large displacements. Computers and Structures, 2021, 242, 106372. | 4.4 | 37 |
| 6 | Modelling imperfections in unreinforced masonry structures: Discrete element simulations and scale model experiments of a pavilion vault. Engineering Structures, 2021, 228, 111499. | 5.3 | 15 |
| 7 | Parametric Stability Analysis of Groin Vaults. Applied Sciences (Switzerland), 2021, 11, 3560. | 2.5 | 11 |
| 8 | Designing bending-active gridshells as falsework for concrete shells through numerical optimization. Engineering Structures, 2021, 240, 112352. | 5.3 | 4 |
| 9 | Understanding the rigid-block equilibrium method by way of mathematical programming. Proceedings of the Institution of Civil Engineers: Engineering and Computational Mechanics, 2021, 174, 178-192. | 0.4 | 1 |
| 10 | Assessing the safety of vaulted masonry structures using thrust network analysis. Computers and Structures, 2021, 257, 106647. | 4.4 | 16 |
| 11 | Design of a funicular concrete bridge with knitted formwork. , 2021, , . | | 2 |
| 12 | Stability and load-bearing capacity assessment of a deformed multi-span masonry bridge using the PRD method. International Journal of Masonry Research and Innovation, 2021, 6, 422. | 0.4 | 1 |
| 13 | Piecewise rigid displacement (PRD) method: a limit analysis-based approach to detect mechanisms and internal forces through two dual energy criteria. Mechanics Research Communications, 2020, 107, 103557. | 1.8 | 26 |
| 14 | Morph &amp; Slerp. , 2020, , . | | 8 |
| 15 | The combination of tile vaults with reinforcement and concrete. International Journal of Architectural Heritage, 2019, 13, 782-798. | 3.1 | 8 |
| 16 | Tile vaults as integrated formwork for reinforced concrete: Construction, experimental testing and a method for the design and analysis of two-dimensional structures. Engineering Structures, 2019, 188, 233-248. | 5.3 | 12 |
| 17 | Optimising the load path of compression-only thrust networks through independent sets. Structural and Multidisciplinary Optimization, 2019, 60, 231-244. | 3.5 | 15 |
| 18 | A Cable-Net and Fabric Formwork System for the Construction of Concrete Shells: Design, Fabrication and Construction of a Full Scale Prototype. Structures, 2019, 18, 72-82. | 3.6 | 28 |

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|---|---------|-----|-----------|
| 19 | Disjointed force polyhedra. CAD Computer Aided Design, 2018, 99, 11-28. | 2.7 | 17 |
| 20 | Load-path optimisation of funicular networks. Meccanica, 2018, 53, 279-294. | 2.0 | 12 |
| 21 | Robotically controlled scale-model testing of masonry vault collapse. Meccanica, 2018, 53, 1917-1929. | 2.0 | 10 |
| 22 | Automated Generation of Knit Patterns for Non-developable Surfaces. , 2018, , 271-284. | | 22 |
| 23 | Computational Tessellation of Freeform, Cut-Stone Vaults. Nexus Network Journal, 2018, 20, 545-566. | 0.7 | 6 |
| 24 | Assessment of the airborne sound insulation from mobility vibration measurements; a hybrid experimental numerical approach. Journal of Sound and Vibration, 2018, 432, 680-698. | 3.9 | 12 |
| 25 | MayaVaultâ€"a Mesh Modelling Environment for Discrete Funicular Structures. Nexus Network Journal, 2018, 20, 567-582. | 0.7 | 9 |
| 26 | Moment-Curvature-Thrust Relationships for Beam-Columns. Structures, 2017, 11, 146-154. | 3.6 | 6 |
| 27 | Compressive Assemblies: Bottomâ€Up Performance for a New Form of Construction. Architectural Design, 2017, 87, 104-109. | 0.1 | 5 |
| 28 | NEST HiLo: Investigating lightweight construction and adaptive energy systems. Journal of Building Engineering, 2017, 12, 332-341. | 3.4 | 29 |
| 29 | Vectorised graphics processing unit accelerated dynamic relaxation for bar and beam elements. Structures, 2016, 8, 111-120. | 3.6 | 6 |
| 30 | Three-dimensional graphic statics: Initial explorations with polyhedral form and force diagrams. International Journal of Space Structures, 2016, 31, 217-226. | 1.0 | 10 |
| 31 | Structural Stone Surfaces: New Compression Shells Inspired by the Past. Architectural Design, 2015, 85, 74-79. | 0.1 | 2 |
| 32 | On the equilibrium of funicular polyhedral frames and convex polyhedral force diagrams. CAD Computer Aided Design, 2015, 63, 118-128. | 2.7 | 57 |
| 33 | Decomposing Three-Dimensional Shapes into Self-supporting, Discrete-Element Assemblies. , 2015, , 187-201. | | 11 |
| 34 | Three-Dimensional (3D) Equilibrium Analysis of Gothic Masonry Vaults. International Journal of Architectural Heritage, 2014, 8, 312-335. | 3.1 | 63 |
| 35 | Interactive Equilibrium Modelling. International Journal of Space Structures, 2014, 29, 25-37. | 1.0 | 7 |
| 36 | Design process for prototype concrete shells using a hybrid cable-net and fabric formwork. Engineering Structures, 2014, 75, 39-50. | 5.3 | 47 |

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|---|---|---|---|
| 37 | Assembling self-supporting structures. ACM Transactions on Graphics, 2014, 33, 1-10. | 7.2 | 67 |
| 38 | Designing unreinforced masonry models. ACM Transactions on Graphics, 2013, 32, 1-12. | 7.2 | 70 |
| 39 | Rethinking structural masonry: unreinforced, stone-cut shells. Proceedings of Institution of Civil Engineers: Construction Materials, 2013, 166, 378-389. | 1.1 | 12 |
| 40 | Interactive Vault Design. International Journal of Space Structures, 2012, 27, 219-230. | 1.0 | 79 |
| 41 | History and overview of fabric formwork: using fabrics for concrete casting. Structural Concrete, 2011, 12, 164-177. | 3.1 | 85 |
| 42 | As Hangs the Flexible Line: Equilibrium of Masonry Arches. Nexus Network Journal, 2006, 8, 13-24. | 0.7 | 119 |
| 43 | Real-time limit analysis of vaulted masonry buildings. Computers and Structures, 2006, 84, 1841-1852. | 4.4 | 185 |