Journal papers on Masonry Arches.

Accepted manuscripts typeset by the Authors.

Please, cite as:

[01] Cocchetti, G., Colasante, G., Rizzi, E. (2011).
On the analysis of minimum thickness in circular masonry arches.
Part I: State of the art and Heyman's solution.
Part II: Present CCR solution.
Part III: Milankovitch-type solution,
Applied Mechanics Reviews, ASME,
Accepted 03 April 2012, Published online 1 October 2012,
September 01, 2011, 64(5), Paper 050802 (Oct. 01, 2012), pp. 1-27,
Available at
https://asmedigitalcollection.asme.org/appliedmechanicsreviews/article/64/5
/050802/370002,
see also https://hdl.handle.net/10446/28394,
DOI: 10.1115/1.4007417.

[02] Rizzi, E., Rusconi, F., Cocchetti, G. (2014).
Analytical and numerical DDA analysis on the collapse mode of circular
masonry arches,
Engineering Structures,
Accepted 18 December 2013, Published online 25 January 2014,
60(February 2014), pp. 241-257,
Avaliable at
https://www.sciencedirect.com/science/article/abs/pii/S014102961300610X,
see also https://hdl.handle.net/10446/30274,
DOI: 10.1016/j.engstruct.2013.12.023.

[03] Cocchetti, G., Rizzi, E. (2020).
Analytical and numerical analysis on the collapse modes of least-thickness
circular masonry arches at decreasing friction,
Frattura ed Integrità Strutturale - Fracture and Structural Integrity,
Special Issue on: Fracture and Damage Detection in Masonry Structures,
Accepted 05 November 2019, Published online 01 January 2020,
14(51), pp. 356-375,
Available Open Access at
https://www.fracturae.com/index.php/fis/article/view/2554,
see also https://hdl.handle.net/10446/150379,
DOI: 10.3221/IGFESIS.51.26.

[04] Cocchetti, G., Rizzi, E. (2020).
Non-linear programming numerical formulation to acquire limit self-standing
conditions of circular masonry arches accounting for limited friction,
International Journal of Masonry Research and Innovation,
Special Issue on: 10IMC Masonry Research in the Third Millennium From
Theory to Practical Applications,
Accepted 19 October 2019, Published online 7 December 2020,
5(4), pp. 569-617,
Available at
https://www.inderscienceonline.com/doi/10.1504/IJMRI.2020.111806,
see also https://hdl.handle.net/10446/173266,
DOI: 10.1504/IJMRI.2020.111806.

[05] Cocchetti, G., Rizzi, E. (2020).
Static upper/lower thrust and kinematic work balance stationarity for
least-thickness circular masonry arch optimization,
Journal of Optimization Theory and Applications,
Special Issue on: Computational Optimization for Structural Engineering and
Applications,
Accepted 15 October 2020, Published online 28 November 2020,
187(3), pp. 707-757,
Available Open Access at
https://link.springer.com/article/10.1007/s10957-020-01772-0,
see also https://hdl.handle.net/10446/173274,
DOI: 10.1007/s10957-020-01772-0.

[06] Cocchetti, G., Rizzi, E. (2021).
Least-thickness symmetric circular masonry arch of maximum horizontal
thrust,
Archive of Applied Mechanics,
Accepted 6 February 2021, Published online 20 March 2021,
91(6), pp. 2617-2639,
Available Open Access at
https://link.springer.com/article/10.1007/s00419-021-01909-1,
see also https://hdl.handle.net/10446/177771,
DOI: 10.1007/s00419-021-01909-1.

[07] Cocchetti, G., Rizzi, E. (2024).
Finite-friction least-thickness self-standing domains of symmetric circular
masonry arches,
Structures,
Special Issue on Shells and Spatial Structures: Conceptual Design,
Construction and Maintenance,
Eds. Stefano Gabriele and Andrea Micheletti,
Accepted 19 June 2024, Published online 8 July 2024,
66(August 2024), Paper 106800, pp. 1-20,
Available Open Access at
https://www.sciencedirect.com/science/article/pii/S2352012424009524,
see also https://hdl.handle.net/10446/274889,
DOI: 10.1016/j.istruc.2024.106800.

[08] Cocchetti, G., Rizzi, E. (2025).
Finite-friction least-thickness self-standing domains of symmetric circular
masonry arches.
Part II: Milankovitch-like selfweight distribution,
Structures,
Accepted 25 March 2025, Published online 15 April 2025,
76(June 2025), Paper 108780, pp. 1-20,
Available Open Access at
https://www.sciencedirect.com/science/article/pii/S2352012425005946,
see also https://hdl.handle.net/10446/301145,
DOI: 10.1016/j.istruc.2025.108780.

[09] Cocchetti, G., Rizzi, E. (2025).
Finite-friction least-thickness self-standing domains of symmetric circular
masonry arches.
Part III: Complementary representations, extremal conditions and collapse
multiplicity,
Structures,
Accepted 28 July 2025, Published online 19 August 2025,
80(October 2025), Paper 109832, pp. 1-28,
available Open Access at
https://www.sciencedirect.com/science/article/pii/S2352012425016479,
see also https://hdl.handle.net/10446/308391,
DOI: 10.1016/j.istruc.2025.109832.

[10] Cocchetti, G., Rizzi, E. (2025).
Self-standing bearing capacity of symmetric circular masonry arches at
finite friction:
Technical handbook of physical states,
International Journal of Solids and Structures,
Accepted 1 October 2025, Published online 6 October 2025,
325(15 January 2026), Paper 113693, pp. 1-22,
available Open Access at
https://www.sciencedirect.com/science/article/pii/S0020768325004792,
see also https://hdl.handle.net/10446/311206,
DOI: 10.1016/j.ijsolstr.2025.113693.