

Costin VÎLCU – List of papers (June 2018)

Preprints

- Double normals of most convex bodies*, arXiv:1804.07015 [math.MG]; with A. Rivière, J. Rouyer, T. Zamfirescu.
- Polyhedra with simple dense geodesics*, arXiv:1704.05011 [math.MG]; with J. Itoh, J. Rouyer.
- Source Unfoldings of Convex Polyhedra with respect to Certain Closed Polygonal Curves*, arXiv:1205.0963 [cs.CG]; extended abstract [EA4]; with J. Itoh, J. O'Rourke.
- Orientable cut locus structures on graphs*, arXiv:1103.3136 [math.DG]; with J. Itoh.
- On the number of cut locus structures on graphs*, arXiv:1103.1764 [math.CO]; with J. Itoh.

Journal articles

- Farthest points on most Alexandrov surfaces*, Adv. Geom., to appear; arXiv:1412.1465 [math.MG]; with J. Rouyer.
- Simple closed geodesics on most Alexandrov surfaces*, Adv. Math. 278 (2015), 103-120; with J. Rouyer.
- Moderate smoothness of Alexandrov surfaces*, Int. J. Math. 26 (2015), [14 pages]; DOI: 10.1142/S0129167X15400042; with J. Itoh, J. Rouyer.
- Every graph is a cut locus*, J. Math. Soc. Japan 67 (2015), 1227-1238; with J. Itoh.
- On the Theorem of the Three Perpendiculars*, Elem. Math. 70 (2015), 71-78; with J. Itoh, J. Rouyer.
- Development of Curves on Polyhedra via Conical Existence*, Comput. Geom. Theory Appl. 47 (2014), 149-163; with J. O'Rourke.
- Every point is critical*, Adv. Math. 235 (2013), 390-397; with I. Bárány, J. Itoh, T. Zamfirescu.
- Cut locus structures on graphs*, Discrete Math. 312 (2012), 524-531; with J. Itoh.
- Sets of tetrahedra, defined by maxima of distance functions*, An. Ştiinţ. Univ. "Ovidius" Constanţa Ser. Mat. 20 (2012), 197-212; with J. Rouyer.
- Quasigeodesics and farthest points on convex surfaces*, Adv. Geom. 11 (2011), 571-584; with K. Ieiri, J. Itoh.
- Star unfolding convex polyhedra via quasigeodesic loops*, Discrete Comput. Geom. 44 (2010), 35-54; rezumatul extins este [EA5]; with J. Itoh, J. O'Rourke.
- What do cylinders look like?*, J. Geom. 95 (2009), 41-48; with J. Itoh.
- Criteria for farthest points on convex surfaces*, Math. Nach. 282 (2009), 1537-1547; with J. Itoh.

- On typical degenerate convex surfaces*, Math. Ann. 340 (2008), 543-567.
- Common maxima of distance functions on orientable Alexandrov surfaces*, J. Math. Soc. Japan 60 (2008), 51-64.
- Antipodal convex hypersurfaces*, Indag. Math. 19 (2008), 411-426; with J. Itoh, J. Rouyer.
- Multiple farthest points on Alexandrov surfaces*, Adv. Geom. 7 (2007), 83-100; with T. Zamfirescu.
- On the length of simple closed quasigeodesics on convex surfaces*, C. R. Math. Acad. Sci. Paris, Ser. I. 343 (2006), 259-264; with J. Itoh.
- Properties of the farthest point mapping on convex surfaces*, Rev. Roum. Math. Pures Appl. 51 (2006), 125-134.
- Symmetry and the farthest point mapping on convex surfaces*, Adv. Geom. 6 (2006), 345-353; with T. Zamfirescu.
- Farthest points and cut loci on some degenerate convex surfaces*, J. Geom. 80 (2004), 106-120; with J. Itoh.
- On Two Conjectures of Steinhilber*, Geom. Dedicata 79 (2000), 267-275.
- Tangent Bundles and Submanifolds*, Bull. Math. Soc. Sci. Math. Roum. 40 (1997), 43-48.
- An idea from convex geometry* (in Romanian), Gazeta Matematică (ser. Științifică și Metodică) 3/1997, 193-196.

Book

- K. Adiprasito, I. Bárány, C. Vîlcu (Eds.): *Convexity and Discrete Geometry Including Graph Theory*, Springer Proceedings in Mathematics & Statistics vol. 148 (2016).

Articles in conference proceedings

- Envelopes of α -sections*, in K. Adiprasito et al. (Eds.), *Convexity and Discrete Geometry Including Graph Theory*, Springer Proc. in Math. & Stat. vol. 148 (2016), 193-218; with N. Chevallier, A. Fruchard.
- Six Problems on the Length of the Cut Locus*, in K. Adiprasito et al. (Eds.), *Convexity and Discrete Geometry Including Graph Theory*, Springer Proc. in Math. & Stat. vol. 148 (2016), 257-259; with T. Zamfirescu.
- The connected components of the space of Alexandrov surfaces*, in D. Ibadula and W. Veys (Eds.), *Bridging Algebra, Geometry and Topology*, Springer Proc. in Math. & Stat. vol. 96 (2014), 249-254; with J. Rouyer.
- Continuous flattening of convex polyhedra*, in A. Márquez et al. (Eds.), *Computational Geometry*, Springer Lecture Notes in Computer Science vol. 7579 (2012), 85-97; extended abstract [EA2]; with J. Itoh, C. Nara.
- On Some Submanifolds of Bochner Flat Indefinite Kähler Manifolds*, in *Lucrările Conf. Anuale a Soc. de Științe Matematice*, București 1997, 311-315.

Contributions in extended abstract volumes

On the geometry of Alexandrov surfaces, in G. Ambrus et al. (Eds.), *Discrete Geometry and Convexity in Honour of Imre Bárány*, Alfréd Rényi Institute of Mathematics, 2017, 150-151; ISBN: 978 963 279 963 6.

Continuous flattening of convex polyhedra, in Proc. of the XIV Spanish Meeting on Computational Geometry (EGC2011), Centre de Recerca Matemàtica (CRM), Documents vol. 8 (2011), 95-98; ISSN 2014-2323; with J. Itoh, C. Nara.

Development of Curves on Polyhedra via Conical Existence, in Proc. 23rd Canadian Conference on Computational Geometry (CCCG'11), 71-76; with J. O'Rourke.

Source Unfoldings of Convex Polyhedra with respect to Certain Closed Polygonal Curves, in *EuroCG'09 25th European Workshop on Computational Geometry*, 61-64; with J. Itoh, J. O'Rourke.

Star unfolding convex polyhedra via quasigeodesic loops, in *Fall Workshop on Computational Geometry 2007*, 3-4; with J. Itoh, J. O'Rourke.