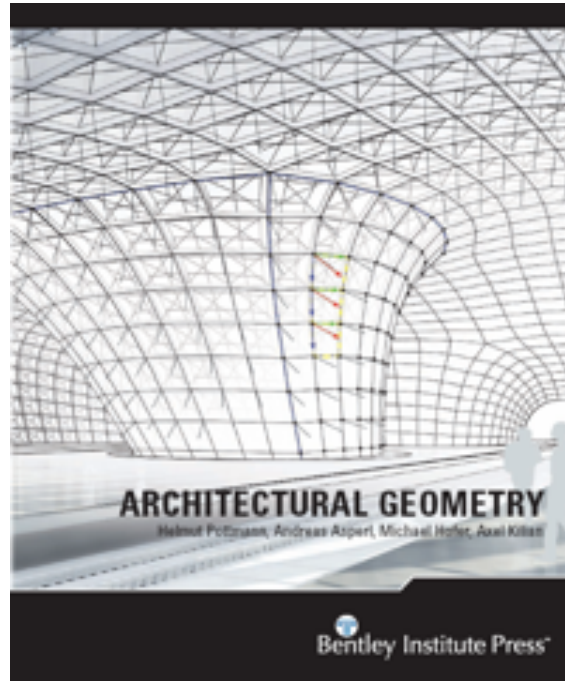




Professor Helmut Pottmann



Pottmann, H., Asperl, A., Hofer, M. and Kilian, A., Architectural Geometry, Bentley Institute Press, October 2007, 744 pages

See:

<https://www.kaust.edu.sa/en/study/faculty/helmut-pottmann>

<https://www.dmg.tuwien.ac.at/pottmann/>

<https://scholar.google.at/citations?user=L5IgnDMAAAAJ&hl=de>

https://www.researchgate.net/scientific-contributions/2127948008_H_Pottmann

Computer, Electrical and Mathematical Science and Engineering Division
King Abdullah University of Science and Technology, Thuwal, Saudi Arabia

Education:

PhD Vienna University of Technology, 1983

MS Vienna University of Technology, 1982

Research Interests:

Applied geometry, classical geometry, discrete differential geometry, computational design and geometry processing with a focus on applications in architecture and manufacturing.

Selected Publications:

Books:

Pottmann, H. and Wallner, J., 2001, Computational Line Geometry, Springer, Heidelberg.

Pottmann, H., Asperl, A., Hofer, M. and Kilian, A., Architectural Geometry, Bentley Institute Press, October 2007, 744 pages

Journal Articles, etc.:

H. Pottmann and J. Wallner. The focal geometry of circular and conical meshes. Advances in Computational Mathematics, 29(August):249–268, 2006

Liu, Y., Pottmann, H., Wallner, J., Yang Y.-L., and Wang, W., 2006, Geometric modeling with conical meshes and developable surfaces, ACM Trans. Graphics 25 (3), 681-689.

H. Pottmann, Y. Liu, J. Wallner, A. Bobenko, and W. Wang. Geometry of multi-layer freeform structures for architecture. *ACM Transactions on Graphics*, 26(3):65, July 2007

H. Pottmann, A. Schiftner, P. Bo, H. Schmiedhofer, W. Wang, N. Baldassini, and J. Wallner. Freeform surfaces from single curved panels. *ACM Transactions on Graphics*, 27(3):1, Aug. 2008

Kilian, M. , Flöry, S. , Chen, Z. , Mitra, N. , Sheffer, A. , and Pottmann, H. , 2008, “ Curved Folding,” *ACM Trans. Graph.*, 27(6), pp. 75:1–75:9.

A. Schiftner, M. Höbinger, J. Wallner, and H. Pottmann. Packing circles and spheres on surfaces. *ACM Transactions on Graphics (TOG)*, 28(5):139, 2009.

Bobenko, A., Pottmann, H. and Wallner, J., 2010, A curvature theory for discrete surfaces based on mesh parallelity, *Math. Annalen* 348, 1-24.

H. Pottmann, P. Grohs, and B. Blachitz. Edge offset meshes in Laguerre geometry. *Advances in Computational Mathematics*, 33:45–73, 2010.

Baldassini N, Pottmann H, Raynaud J, Schiftner A, New strategies and developments in transparent free-form designs, *International Journal of Space Structure*, 25(3): 185-197, 2010.

J. Wallner and H. Pottmann. Geometric Computing for Freeform Architecture. *Journal of Mathematics in Industry*, 1(1):4, 2011.

Y.-L. Yang, Y.-J. Yang, H. Pottmann, and N. J. Mitra. Shape Space Exploration of Constrained Meshes. *ACM Trans. Graphics*, 30:124, 2011.

Vouga E, Höbinger M, Wallner J, Pottmann H. Design of self-supporting surfaces. *ACM trans. graphics proc. SIGGRAPH*; 2012.

J. Wang, C. Jiang, P. Bompas, J. Wallner, and H. Pottmann. Discrete line congruences for shading and lighting. In *Computer Graphics Forum*, volume 32, pages 53–62. Wiley Online Library, 2013

Pottmann H (2013) Architectural geometry and fabrication-aware design. *Nexus Netw J* 15(2):195

C. Tang, X. Sun, A. Gomes, J. Wallner, and H. Pottmann. Form-finding with polyhedral meshes made simple. *ACM Trans. Graphics*, 33(4), 2014.

H. Pottmann, C. Jiang, M. Höbinger, J. Wang, P. Bompas, and J. Wallner. Cell packing structures. *Computer-Aided Design*, 60:70–83, mar 2015.

Jiang C, Wang J, Wallner J, Pottmann H. Freeform honeycomb structures. *Comput Graph Forum* 2014;33(5).

H. Pottmann, M. Eigensatz, A. Vaxman, and J. Wallner. Architectural geometry. *Computers & graphics*, 47:145–164, 2015.

Jiang, C., Tang, C., Vaxman, A., Wonka, P., & Pottmann, H., Polyhedral patterns. *ACM Transactions on Graphics (TOG)*, 2015; 34(6), 172.

Kilian, M., Pellis, D., Wallner, J. and Pottmann, H., 2016, Material-minimizing forms and structures, *ACM Trans. Graphics* 36 (6), article 173.

A.I. Bobenko, H. Pottmann, T. Rörig, Multi-nets. Classification of discrete and smooth surfaces with characteristic properties on arbitrary parameter rectangles, *Discrete and Comp. Geometry* (2019)