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List of Publications

April 19, 2013

1 Books

- 2013 [1] **April 2013** (with J. Mukhopadhyay, P. P. Das, S. Chattopadhyay and B. N. Chatterji): *Digital Geometry in Image Processing*. CRC Press.

2 Journals

- Forthcoming** [2] **Forthcoming a** (with S. Pal): Fast circular arc segmentation based on approximate circularity and cuboid graph. To appear in: *Journal of Mathematical Imaging and Vision*.
- [3] **Forthcoming b** (with R. Klette): Generation of random digital simple curves with artistic emulation. To appear in: *Journal of Mathematical Imaging and Vision*.
<http://link.springer.com/article/10.1007%2Fs10851-012-0388-1>.
- [4] **Forthcoming c** (with S. Pal and R. Dutta): Circular arc segmentation by curvature estimation and geometric validation. To appear in: *International Journal of Image and Graphics*.
- [5] **Forthcoming d** (with N. Karmakar, A. Biswas and B. B. Bhattacharya): A combinatorial algorithm to construct 3d isothetic covers. To appear in: *International Journal of Computer Mathematics*. <http://www.tandfonline.com/doi/abs/10.1080/00207160.2012.734813>.
- 2013 [6] **2013** (with M. Dutt and A. Biswas): Approximate partitioning of 2d objects into orthogonally convex components. In: *Computer Vision and Image Understanding* 117, No. 4, pp. 326–341.
- 2012 [7] **2012a** (with S. Pal): Determining digital circularity using integer intervals. In: *Journal of Mathematical Imaging and Vision* 42, No. 1, pp. 1–24.
- [8] **2012b** (with A. Biswas, M. Sarkar and B. B. Bhattacharya): A linear-time combinatorial algorithm to find the orthogonal hull of an object on the digital plane. In: *Information Sciences* 216, pp. 176–195.
- 2011 [9] **2011a** (with M. Dutt, A. Sarkar, A. Biswas and B. B. Bhattacharya): Efficient word segmentation and baseline localization in handwritten documents using isothetic covers. In: *International Journal of Digital Library Systems* 2, No. 3, pp. 1–13.
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- [12] **2011d** (with S. Mandal, A. K. Das and B. Chanda): A unified algorithm for identification of various tabular structures from document images. In: *International Journal of Digital Library Systems* 2, No. 2, pp. 27–54.

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- 2010 [14] **2010a** (with A. Biswas and B. B. Bhattacharya): Construction of isothetic covers of a digital object—A combinatorial approach. In: *Journal of Visual Communication and Image Representation* 21, No. 4, pp. 295–310.
- [15] **2010b** (with S. Pal): Cubic approximation of curve-shaped objects in \mathbb{Z}^2 —A generalized approach based on discrete curvature. In: *Journal of Discrete Mathematical Sciences and Cryptography* 13, No. 5, pp. 407–427.
- [16] **2010c** (with S. Pal, A. Biswas and B. B. Bhattacharya): Understanding digital documents using gestalt properties of isothetic components. In: *International Journal of Digital Library Systems* 1, No. 3, pp. 1–25.
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3 Book Chapters

- 2012 [26] **2012a** (with B. B. Bhattacharya): Digital straightness, circularity, and their applications to image analysis. In: Barneva, R./Brimkov, V. (eds.): *Digital Geometry Algorithms (Lecture Notes in Computational Vision and Biomechanics, Volume 2, Part 3)*. Springer.
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- 2008 [29] **2008** (with A. Bishnu, B. B. Bhattacharya, M. K. Kundu, C. A. Murthy and T. Acharya): A combinatorial approach to ridge extraction in a gray-scale fingerprint image and its hardware implementation. In: Chanda, B./Murthy, C. A. (eds.): *Advances in Intelligent Information Processing: Tools and Applications (Statistical Science and Interdisciplinary Research, Vol. 2)*. World Scientific.

4 Proceedings

- 2012 [30] **2012a** (with S. Bag and G. Harit): Detection of structural concavities in character images—A writer-independent approach. In: *1st Indo-Japan conference on Perception and Machine Intelligence: PerMin'12*, vol. 7143 (LNCS), pp. 260–268.
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- [32] **2012c** (with M. Dutt, A. Biswas and B. B. Bhattacharya): On finding shortest isothetic path inside a digital object. In: *15th International Workshop on Combinatorial Image Analysis: IWCIA'12*, vol. 7655 (LNCS), pp. 1–15.
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5 Patents

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