

BIO DATA

Name : **SUBHAS CHANDRA NANDY**

Address (Office): Advanced Computing and Microelectronics Unit
 Indian Statistical Institute
 203 B. T. Road, Calcutta 700 108, INDIA
 Tel: (0091)(033)2575 3006, Fax: (0091)(033)2577 3035
 email : nandysc@isical.ac.in

Address (Residence) : Narasingha Dutta Ghat Road
 P. O. Sukchar, Dt. 24 Parganas (North)
 Pin 700-115, W. Bengal, INDIA
 Tel : (0091)(033)2553 6394, 6395, Mobile: 9903377507

Date of birth : July 2, 1959

Academic Qualification

1. Ph.D. in Computer Science, University of Calcutta, 1996
2. M.Tech.(Hons.) in Computer Science, Indian Statistical Institute, 1985.
3. M.Sc. in Statistics, University of Calcutta, 1981.
4. B.Sc. (Hons.) in Statistics, University of Calcutta, 1978.
5. Higher Secondary, West Bengal Board of Secondary Education, 1975.

Work Experience

June 2003 - till date: Professor, Advanced Computing and Microelectronics Unit, Indian Statistical Institute, Kolkata.

June 1999 - May 2003: Associate Professor, Advanced Computing and Microelectronics Unit, Indian Statistical Institute, Kolkata.

June 1993 - May 1999: Computer Systems Engineer, Computer and Statistical Services Center, Indian Statistical Institute, Kolkata.

Dec. 1988 - May 1993: Programmer, Computer and Statistical Services Center, Indian Statistical Institute, Kolkata.

Aug. 1986 - Nov. 1988: Data Processing Technician, Computer Science Unit, Indian Statistical Institute, Kolkata.

May 1986 - Aug. 1986: Statistician, Indian Tea Association, Royal Exchange, 6 Netaji Subhas Road, Kolkata.

Nov. 1985 - April 1986: Trainee Programmer, Computer Science Unit, Indian Statistical Institute, Kolkata.

1 Professional Activities

Served as one of the organizers of the Shonan Workshop on Geometric Graphs: Theory and Applications, Tokyo, Japan, during October 30 - November 2, 2017.

Served as a member in the Programme Committee of WALCOM 2018.

Served as a member in the Programme Committee of WALCOM 2017.

Served as a member in the Programme Committee of WALCOM 2015.

Served as a member in the Programme Committee of FSTTCS 2014.

Served as a Guest Editor of the Journal *Theoretical Computer Science*, vol 442, 2012.

Served as a member in the Programme Committee of WALCOM 2011.

Served as a member in the Programme Committee of WALCOM 2008.

Served as a member in the Programme Committee of FSTTCS 2006.
Served as the Chair of the Organizing Committee of FSTTCS 2006.
Served as a member in the Programme Committee of ISAAC 2006.
Served as the Chair of the Organizing Committee of ISAAC 2006.
Served as a member in the Programme Committee of WALCOM 2008.
Served as the Chair of the Organizing Committee of WALCOM 2009.
Served as a member in the Programme Committee of WALCOM 2010.
Serving as a member in Steering Committee of Workshop on Algorithms and Computation (WALCOM).

2 Administrative Activities

Acting Head of the Advanced Computing and Microelectronics Unit During the period March 5, 2013 to June 7, 2013.

Professor-in-Charge of the Computer and Communication Sciences Division during the period September 2010 - August 2012.

Academic Visits

1. Visited NII Shonan Workshop on Geometric Graphs: Theory and Applications, Tokyo, Japan, during October 30 - November 2, 2017.
2. Visited Carleton University, Ottawa, Canada during August 12, 2015 - September 11, 2015.
3. Attended Canadian Conf. on Computational Geometry, Queen's University, Kingston, Canada, during August 9-11, 2015.
4. Attended Workshop on Algorithms and Data Structure, U. of Victoria, Victoria, Canada, during August 5-7, 2015.
5. Visited Simon Fraser University, Vancouver, Canada, during July 28-August 5, 2015.
6. Visited Simon Fraser University, Vancouver, Canada, during November 25-December 4, 2014.
7. Visited Carleton University, Ottawa, Canada during August 14, 2014 - December 5, 2014.
8. Attended Canadian Conf. on Computational Geometry, Nova Scotia, Canada, during August 11-13, 2014.
9. Visited School of Information Sciences, Japan Advanced Institute of Science and Technology, Ishikawa, Japan, during October 7-19, 2013.
10. Visited Dept. on Computer Science and Engineering, IIT Delhi, during Sept. 2-6, 2013.
11. Visited School of Information Sciences, Japan Advanced Institute of Science and Technology, Ishikawa, Japan, during February 7-17, 2010.
12. Visited School of Technology and Computer Science, Tata Institute of Fundamental Research during July 17-31, 2009.
13. Visited School of Technology and Computer Science, Tata Institute of Fundamental Research during July 5-20, 2008.
14. Attended 18th. Annual International Symposium on Algorithms and Computation, Sendai, Japan, December 17-19, 2007.
15. Visited School of Information Sciences, Japan Advanced Institute of Science and Technology, Ishikawa, Japan, during December 3-16, 2007.
16. Visited School of Technology and Computer Science, Tata Institute of Fundamental Research during July 22-Aug. 3, 2007.
17. Visited School of Technology and Computer Science, Tata Institute of Fundamental Research during July 15-25, 2006.
18. Attended 47th annual IEEE Global Telecommunications Conference (Globecom 2004), Dallas, Texas, USA, Nov. 29-Dec. 3, 2004.

19. Visited School of Technology and Computer Science, Tata Institute of Fundamental Research during July 16-25, 2004.
20. Served as a visiting professor in the School of Information Sciences, Japan Advanced Institute of Science and Technology, Ishikawa, Japan from February 25, 2003 to March 10, 2003.
21. Attended 6th Annual International Conference, on Computing and Combinatorics (COCOON 2000), Sydney, Australia July 26-28, 2000.
22. Served as a Research Associate in Dept. of Computer Science, City University of Hongkong, Kowloon, Hongkong, from May 21, 2000 to August 21, 2000.
23. Attended 11th. Canadian Conference on Computational Geometry, University of British Columbia, Canada, August 15-18, 1999.
24. Attended 5th Annual International Conference, on Computing and Combinatorics (COCOON 1999), July 27-29, Tokyo, Japan.
25. Served as an Associate in the School of Information Sciences, Japan Advanced Institute of Science and Technology, Ishikawa, Japan from August 3, 1998 to August 24, 1999.
26. Attended 8th Canadian Conference on Computational Geometry, Carleton University, Ottawa, Canada, August 12-15, 1996.

List of Ph.D. Thesis Supervised

1. Minati De, *Space-efficient Algorithms for Geometric Optimization Problems*, submitted in Indian Statistical Institute, June 2013.
2. Gautam K. Das, *Placement and Range Assignment in Power-aware Radio Networks*, Indian Statistical Institute, June 2008.
3. Partha P. Goswami, *Application of computational geometry in visibility graph recognition and nearest neighbor problems*, University of Calcutta, August 2006.

List of ongoing Ph.D. Students

1. Sanjib Sadhu, Lecturer, NIT Durgapur
2. Ankush Acharya, SRF, ISI Kolkata
3. Sanjana De, JRF, ISI Kolkata

List of Journal Publications

1. S. Banerjee, N. Misra, S. C. Nandy, *Color Spanning Objects: Algorithms and Hardness Results*, Discrete Applied Mathematics, accepted, 2018.
2. A. Maheshwari, S. C. Nandy, D. Pattanayak, S. Roy, M. H. M. Smid, *Geometric Path Problems with Violations*, Algorithmica, vol. 80, no. 2, pp. 448-471, 2018.
3. A. Acharyya, S. C. Nandy, S. Roy, *Minimum width color spanning annulus*, Theoretical Computer Science, vol. 725, pp. 16-30, 2018.
4. A. Biniiaz, A. Maheshwari, S. C. Nandy, M. H. M. Smid, *An optimal algorithm for plane matchings in multipartite geometric graphs*, Computational Geometry, vol. 63, pp. 1-9, 2017.
5. B. K. Bhattacharya, M. De, A. Maheshwari, S. C. Nandy, S. Roy, *Rectilinear path problems in restricted memory setup*, Discrete Applied Mathematics, vol. 228, pp. 80-87, 2017.
6. S. C. Nandy, S. Pandit, S. Roy, *Faster approximation for maximum independent set on unit disk graph*, Information Processing Letters, vol. 127, pp. 58-61, 2017.
7. B. K. Bhattacharya, S. C. Nandy, S. Roy, *Space-efficient algorithm for computing a centerpoint of a set of points in \mathbb{R}^2* , Theor. Comput. Sci., vol. 615, pp. 61-70, 2016.
8. P. Carmi, G. K. Das, R. K. Jallu, S. C. Nandy, P. R. Prasad, Y. Stein, *Minimum Dominating Set Problem for Unit Disks Revisited*, Int. J. Comput. Geometry Appl., vol. 25(3), pp. 227-244, 2015.
9. G. K. Das, M. De, S. Kolay, S. C. Nandy, S. Sur-Kolay, *Approximation algorithms for maximum independent set of a unit disk graph*, Information Processing Letters, vol. 115(3), pp. 439-446, 2015.

10. M. De, S. C. Nandy, S. Roy, *Prune-and-search with limited workspace*, Journal of Computer & System Sciences, vol. 81(2), pp. 398-414, 2015.
11. M. De, S. C. Nandy and S. Roy, *In-place Algorithms for Computing a Largest Clique in Geometric Intersection Graphs*, Discrete Applied Mathematics, vol. 178, pp. 58-70, 2014.
12. D. Mukhopadhyay, S. C. Nandy, *Efficient multiple-precision integer division algorithm*, Information Processing Letters, vol. 114, pp. 152-157, 2014.
13. M. De, G. K. Das, P. Carmi and S. C. Nandy, *Approximation algorithms for a variant of discrete piercing set problem for unit disks*, accepted in Int. J. on Computational Geometry and Applications, 2013.
14. A. Khan, S. P. Pal, M. Aanjaneya, A. Bishnu, S. C. Nandy, *Diffuse reflection diameter and radius for convex-quadrilateralizable polygons*, Discrete Applied Mathematics, vol. 161, pp. 1496-1505, 2013.
15. D. Dash, A. Bishnu, A. Gupta, S. C. Nandy, *Approximation algorithms for deployment of sensors for line segment coverage in wireless sensor networks*, Wireless Networks, vol. 19, pp. 857-870, 2013.
16. M. De, A. Maheshwari, S. C. Nandy, M. H. M. Smid, *An in-place min-max priority search tree*, Comput. Geom., vol. 46, pp. 310-327, 2013.
17. J. Augustine, S. Das, A. Maheshwari, S. C. Nandy, S. Roy, S. Sarvattomananda, *Localized geometric query problems*, Comput. Geom., vol. 46, pp. 340-357, 2013.
18. B. B. Bhattacharya, S. C. Nandy, *New variations of the maximum coverage facility location problem*, European Journal of Operational Research, vol. 224, pp. 477-485, 2013.
19. A. Karmakar, S. Das, S. C. Nandy, B. K. Bhattacharya, *Some variations on constrained minimum enclosing circle problem*, J. Combinatorial Optimization, vol. 25, pp. 176-190, 2013.
20. S. K. Ghosh, P. P. Goswami, A. Maheshwari, S. C. Nandy, S. P. Pal, S. Sarvattomananda, *Algorithms for computing diffuse reflection paths in polygons*, The Visual Computer, vol. 28, pp. 1229-1237, 2012.
21. M. Ahmed, A. Maheshwari, S. C. Nandy, S. Roy, *On the number of shortest descending paths on the surface of a convex terrain*, J. Discrete Algorithms, vol. 9, pp. 182-189, 2011.
22. D. Mondal, A. Kumar, A. Bishnu, K. Mukhopadhyaya, S. C. Nandy, *Measuring the quality of surveillance in a wireless sensor network*, Int. J. Foundation of Computer Science, vol. 22, pp. 983-998, 2011.
23. S. C. Nandy, K. Mukhopadhyaya, B. B. Bhattacharya, *Recognition of largest empty orthoconvex polygon in a point set*, Information Processing Letters, vol. 110, pp. 746-752, 2010.
24. S. Majumder, S. C. Nandy, B. B. Bhattacharya, *Separating multi-color points on a plane with fewest axis-parallel lines*, Fundamenta Informatica, vol. 99, pp. 315-324, 2010.
25. G. K. Das, S. Das and S. C. Nandy, *Homogeneous 2-hop broadcast in 2D*, Computational Geometry: Theory and Applications, vol. 43, pp. 182-190, 2010.
26. S. Das, P. P. Goswami and S. C. Nandy, *Smallest color-spanning object revisited*, International Journal of Computational Geometry & Applications, vol. 19, pp. 457-478, 2009.
27. G. K. Das, D. Mukhopadhyay, S. C. Nandy, *Improved algorithm for the widest empty 1-corner corridor*, Information Processing Letters, vol. 109, pp. 1060-1065, 2009.
28. S. Roy, A. Karmakar, S. Das and S. C. Nandy, *Constrained minimum enclosing circle with center on a query line segment*, Computational Geometry: Theory and Applications, vol. 42, pp. 632-638, 2009.
29. P. Banerjee, S. Sur-Kolay, A. Bishnu, S. Das, S. C. Nandy and S. Bhattacharjee, *FPGA placement using space filling curves: theory meets practice*, accepted in the Special issue on Configuring Algorithms, Processes and Architecture (CAPA) in ACM Trans. on Embedded Computing Systems, 2009.
30. B. Aronov, T. Asano, Y. Kikuchi, S. C. Nandy, S. Sasahara and T. Uno, *A Generalization of Magic Squares with Applications to Digital Halftoning*, Theory of Computing Systems, vol. 42, pp. 143-156, 2008.

31. G. K. Das, S. Roy, S. Das, S. C. Nandy, *Variations of Base-Station Placement Problem on the Boundary of a Convex Region*, Int. Journal of Foundations of Computer Science vol. 19, pp. 405-427, 2008.
32. G. K. Das, S. C. Nandy, *Weighted broadcast in linear radio networks*, Information Processing Letters, vol. 106, pp. 136-143, 2008.
33. P. P. Goswami, S. Das and S. C. Nandy, *Color spanning objects revisited*, accepted in *Int. Journal on Computational Geometry and Applications*, 2008.
34. G. K. Das, S. C. Ghosh and S. C. Nandy, Improved algorithm for minimum cost range assignment problem for linear radio networks , Int. Journal of Foundations of Computer Science, vol. 18, pp. 619-636, 2007.
35. S. Roy, S. Das and S. C. Nandy, *Shortest monotone descent path problem in polyhedral terrain*, Computational Geometry - Theory and Applications, vol. 37, pp. 115-133, 2007.
36. P. P. Goswami, S. Das and S. C. Nandy, *Chromatic distribution of k -nearest neighbors of a line segment in a planar colored point set*, Information Processing Letters, vol. 102, pp. 163-168, 2007.
37. G. K. Das, S. Das, S. C. Nandy, B. P. Sinha, *Efficient algorithm for placing a given number of base stations to cover a convex region*, Journal on Parallel Distributed Computing, vol. 66, pp. 1353-1358, 2006.
38. A. Bishnu, S. Das, S. C. Nandy and B. B. Bhattacharya, *Simple Algorithm for Point Set Pattern Matching under Rigid Motion*, Pattern Recognition, vol. 39, pp. 1662-1671, 2006.
39. G. K. Das, S. Das and S. C. Nandy, *Range Assignment for Energy Efficient Broadcasting in Linear Radio Networks*, Theoretical Computer Science, vol 352, pp. 332-341, 2006.
40. P. P. Goswami, S. Das and S. C. Nandy, *Smallest k -point enclosing rectangle and square of arbitrary orientation*, Information Processing Letters, vol 94, pp. 259-266, 2005.
41. P. P. Goswami, S. Das and S. C. Nandy, *Triangular Range Counting Query in 2D and its Application in Finding k Nearest Neighbors of a Line Segment*, Computational Geometry: Theory and Applications, vol. 29, pp. 163-175, 2004.
42. S. Roy, P. P. Goswami, S. Das and S. C. Nandy, *Optimal Algorithm for a Special Point-labeling Problem*, Information Processing Letters, vol. 89, pp. 91-98, 2004.
43. S. Majumder, S. C. Nandy and B. B. Bhattacharya, *On Finding a Staircase Channel with Minimum Crossing Nets in a VLSI Floorplan*, accepted in Journal on Circuits, Systems and Computers, vol. 13(5), pp. 1019-1038, 2004.
44. S. C. Nandy and B. B. Bhattacharya, *On Finding an Empty Staircase Polygon of Largest Area (Width) in a Planar Point-set*, Computational Geometry - Theory and Applications, Vol. 26, pp. 143-171 2003.
45. J. Chaudhuri, S. C. Nandy and S. Das, *Largest empty rectangle among a point set*, Journal of Algorithms, vol. 54, pp. 54-78, 2003.
46. S. C. Nandy, S. Das and P. P. Goswami, *An efficient k nearest neighbors searching algorithm for a query line* Theoretical Computer Science, vol. 299 (1-3), pp. 273-288, 2003.
47. T. Asano, A. Hernandez-Barrera and S. C. Nandy, *Translating a convex polyhedron over monotone polyhedra*, Computational Geometry: Theory and Applications, vol. 23(3), pp. 257-269, 2002.
48. S. C. Nandy, T. Asano and T. Harayama, *Shattering a set of objects in 2D*, in Discrete Applied Mathematics, vol 122, pp. 183-194, October 2002.
49. P. S. Dasgupta, P. Pan, S. C. Nandy and B. B. Bhattacharya, *Monotone bipartitioning problem in a planar point set with applications in VLSI*, ACM Transactions on Design Automation of Electronics Systems (TODAES), vol. 7, pp. 231-248, 2002.
50. P. S. Dasgupta, A. K. Sen, S. C. Nandy, B. B. Bhattacharya, *Searching Networks with Unrestricted Arc Costs*, in IEEE Transactions on Systems, Man and Cybernetics: Part A, vol. 31, pp. 497-507, November 2001.
51. S. C. Nandy, T. Harayama and T. Asano, *Dynamically Maintaining the Widest k -dense Corridor*, Theoretical Computer Science, vol. 255, pp. 627-639, 2001.
52. S. C. Nandy, B. B. Bhattacharya and A. Hernandez Barrera, *Safety zone problem*, Journal of Algorithms, vol. 37, pp. 538-569, 2000.

53. A. Chatterjee, S. S. Sarkar, S. C. Nandy, *Petrological mixing - a regression approach*, Calcutta Statistical Association Bulletin, vol. 50, Nos. 197-198, pp. 79-94, 2000.
54. P. Mitra and S. C. Nandy *Efficient computation of rectilinear geodesic voronoi neighbor in presence of obstacles*, Journal of Algorithms, vol. 28, pp. 315-338, 1998.
55. S. C. Nandy and B. B. Bhattacharya *Largest empty cuboid among points and blocks*, Computers and Mathematics with Applications, vol. 36, no. 3, pp. 11-20, 1998.
56. S. C. Nandy, G. N. Nandakumar and B. B. Bhattacharya *Efficient Algorithms for Single and Two-layer Linear Placement of Parallel Graphs*, Computers and Mathematics with Applications, vol. 34, no. 12, pp. 121-135, 1997.
57. S. C. Nandy and B. B. Bhattacharya *A Unified Algorithm for Finding Maximum and Minimum Point Enclosing Rectangles and Cuboids*, Computers and Mathematics with Applications, vol. 29, no. 8, pp. 45-61, 1995.
58. S. C. Nandy, B. B. Bhattacharya and S. Ray *Dynamic Identification of All Maximal Empty Rectangles in VLSI Layout Design using Corner Stitching*, Journal of Information Technology, vol. 2, no. 1, pp. 44-51, 1991.
59. T. Krishnan and S. C. Nandy *Efficiency of Discriminant Analysis when Initial Samples are Classified Stochastically*, Pattern Recognition, vol. 23, pp. 529-537, 1990.
60. T. Krishnan and S. C. Nandy *Efficiency of Logistic-Normal Stochastic Supervisor*, Pattern Recognition, vol. 23, pp. 529-537, 1990.
61. T. Krishnan and S. C. Nandy *Discriminant Analysis with a Stochastic Supervisor*, Pattern Recognition, vol. 20, no. 4, pp. 379-384, 1987.
62. A. K. Chatterjee, S. S. Sarkar, S. C. Nandy and A. K. Saha, *Cluster Analysis Revisited : A Case Study from Bihar Mica Belt Granites, Eastern India*, in Indian Minerals, vol. 43, no. 2, pp.128-135.
63. A. K. Chatterjee, S. S. Sarkar, S. C. Nandy and A. K. Saha, *A Quadratic Programming Approach for Solving Petrological Mixing Model*, in Indian Journal of Earth Science, vol. 16, no. 2, pp. 104-118, 1989.
64. S. S. Sarkar, A. Chatterjee, S. C. Nandy and A. K. Saha, *Classification of the granites of Bihar Mica Belt, Eastern India using Stepwise Multigroup Discriminant Analysis & Cluster Analysis*, in Indian Journal of Earth science, vol. 15, 1988.

List of Conference Publications

1. N. Tripathi, M. Pal, M. De, G. K. Das, S. C. Nandy, *Guarding Polyhedral Terrain by k -Watchtowers*, FAW pp. 112-125, 2018.
2. S. K. Jena, R. K. Jallu, G. K. Das, S. C. Nandy, *The Maximum Distance- d Independent Set Problem on Unit Disk Graphs*, FAW, pp. 68-80, 2018.
3. S. C. Nandy, S. Pandit, S. Roy, *Covering Points: Minimizing the Maximum Depth*, CCCG, pp. 37-42, 2017.
4. A. Acharyya, M. De, S. C. Nandy, *Range Assignment of Base-Stations Maximizing Coverage Area without Interference*, CCCG, pp. 126-131, 2017.
5. S. Sadhu, S. Roy, S. C. Nandy, S. Roy, *Optimal Covering and Hitting of Line Segments by Two Axis-Parallel Squares*, COCOON, pp. 457-468, 2017.
6. S. Sadhu, S. Roy, S. Nandi, S. C. Nandy, S. Roy, *Computing the Triangle Maximizing the Length of Its Smallest Side Inside a Convex Polygon*, ICCSA (2), pp. 509-524, 2017.
7. A. Acharyya, S. C. Nandy, S. Pandit, S. Roy, *Covering Segments with Unit Squares*, WADS, pp. 1-12, 2017.
8. M. Basappa, R. K. Jallu, G. K. Das, S. C. Nandy, *The Euclidean k -Supplier Problem*, ALGOSENSORS, pp. 129-140, 2016.
9. S. Banerjee, N. Misra, S. C. Nandy, *Color Spanning Objects: Algorithms and Hardness Results*, CALDAM, pp. 37-48, 2016.

10. A. Acharyya, S. C. Nandy, S. Roy, *Minimum Width Color Spanning Annulus*, COCOON, pp. 431-442, 2016.
11. B. K. Bhattacharya, M. De, A. Maheshwari, S. C. Nandy, S. Roy, *Rectilinear Path Problems in Restricted Memory Setup*, CALDAM, pp. 69-80, 2015.
12. D. Mukhopadhyay, S. C. Nandy, *YAHMD - Yet another heap memory debugger*, ReTIS, pp. 144-150, 2015.
13. A. Biniiaz, A. Maheshwari, S. C. Nandy, M. H. M. Smid, *An Optimal Algorithm for Plane Matchings in Multipartite Geometric Graphs*, Workshop on Algorithms and Data Structures (WADS), pp. 66-78, 2015.
14. B. K. Bhattacharya, S. C. Nandy, S. Roy, *Space-Efficient Algorithm for Computing a Centerpoint of a Point Set in R^2* , Canadian Conference on Computational Geometry (CCCG), 2014.
15. B. K. Bhattacharya, M. De, S. C. Nandy, S. Roy, *Maximum Independent Set for Interval Graphs and Trees in Space Efficient Models*, Canadian Conference on Computational Geometry (CCCG), 2014.
16. M. De, S. C. Nandy, S. Roy, *Minimum Enclosing Circle with Few Extra Variables*, FSTTCS, pp. 510-521, 2012.
17. M. De, S. C. Nandy, S. Roy, *In-Place algorithms for computing a largest clique in geometric intersection graphs*, in Proc. Frontiers in Algorithmics and Algorithmic Aspects in Information and Management - Joint International Conference (FAW-AAIM), LNCS 7285, pp. 327-338, 2012.
18. D. Dash, A. Bishnu, A. Gupta, S. C. Nandy, *Finding the quality of line coverage of a sensor network*, in Proc. 13th Int. Conf. on Distributed Computing and Networking (ICDCN), LNCS 7129, pp. 214-217, 2012.
19. D. Dash, A. Bishnu, A. Gupta, S. C. Nandy, *Approximation algorithms for deployment of sensors for line segment coverage in wireless sensor networks*, in Proc. 4th. Int. Conf. on Communication Systems and Networks (COMSNETS), pp. 1-10, 2012.
20. M. De, A. Maheshwari, S. C. Nandy, M. H. M. Smid, *An in-place priority search tree*, in Proc. 23rd Annual Canadian Conference on Computational Geometry, 2011.
21. M. De, G. K. Das, S. C. Nandy, *Approximation algorithms for the discrete piercing set problem for unit disks*, 23rd Annual Canadian Conference on Computational Geometry, 2011.
22. M. De, S. C. Nandy, *Space-efficient algorithms for empty space recognition among a point set in 2D and 3D*, 23rd Annual Canadian Conference on Computational Geometry, 2011.
23. A. Karmakar, S. Das, S. C. Nandy, B. K. Bhattacharya, *Some variations on constrained minimum enclosing circle problem*, in Proc. 4th. Int. Conf. on Combinatorial Optimization and Applications (COCOAA), pp. 354-368, 2010.
24. B. B. Bhattacharya, S. C. Nandy, *New variations of the reverse facility location problem*, 22rd Annual Canadian Conference on Computational Geometry (CCCG), pp. 241-244, 2010.
25. G. K. Das, A. Mukhopadhyay, S. C. Nandy, S. Patil, S. V. Rao, *Computing the straight skeleton of a monotone polygon in $O(n \log n)$ time*, 22rd Annual Canadian Conference on Computational Geometry (CCCG), pp. 207-210, 2010.
26. S. Sadhu, A. Bishnu, S. C. Nandy, P. P. Goswami, *Cluster connecting problem inside a polygon*, 22rd Annual Canadian Conference on Computational Geometry (CCCG), pp. 265-268, 2010.
27. A. Bishnu, S. Das, S. C. Nandy and B. B. Bhattacharya, *A Simple Algorithm for Approximate Partial Point Set Pattern Matching under Rigid Motion*, in Proc. 4th. International Workshop on Algorithms and Computation (WALCOM 2010), Dhaka, Bangladesh, February 2010.
28. S. K. Ghosh, P. P. Goswami, A. Maheshwari, S. C. Nandy, S. P. Pal and Swami Sarvattomananda, *Algorithms for computing diffuse reflection paths in polygons*, in Proc. 3rd. International Workshop on Algorithms and Computation (WALCOM 2009), LNCS-5431, pp. 47-58, 2009.

29. G. K. Das, D. Mukhopadhyay and S. C. Nandy, *Improved Algorithm for a Widest 1-corner Corridor*, in Proc. 3rd. International Workshop on Algorithms and Computation (WALCOM 2009), LNCS-5431, pp. 83-92, 2009.
30. S. C. Nandy, K. Mukhopadhyaya, B. B. Bhattacharya, *Recognition of largest empty orthoconvex polygon in a point set*, Canadian Conf. on Computational Geometry (CCCG 2008), pp. 87-90, 2008.
31. G. K. Das, S. Roy, S. Das, S. C. Nandy, *Base Station Placement Problem on the Boundary of a Convex Region*, 1st. International Workshop on Algorithms and Computation (WALCOM 2007), Dhaka, Bangladesh, pp. 151-152, 2007.
32. G. K. Das, S. C. Nandy, *Weighted Broadcast in Linear Radio Networks*, 2nd Int. Conf. on Algorithmic Aspects in Information and Management (AAIM 2006), LNCS 4041, pp. 343-353, 2006.
33. S. Roy, A. Karmakar, S. Das, S. C. Nandy, *Constrained Minimum Enclosing Circle with Center on a Query Line Segment*, Mathematical Foundations of Computer Science (MFCS 2006), LNCS 4162, Slovakia, pp. 765-776, 2006.
34. G. K. Das, S. Das and S. C. Nandy, *Homogeneous 2-hops broadcast in 2D*, Proc. Int. Conf. on Computing Science and Applications (ICCSA-2006), LNCS 3981, Glasgow, UK, pp. 750-759, 2006.
35. G. K. Das, S. Das, S. C. Nandy and B. P. Sinha, *Placing a Given Number of Base Stations to Cover a Convex Region*, Proc. Int. Workshop. on Distributed Computing (IWDC-2005), LNCS 3741, Kharagpur, India, pp. 57-62, 2005.
36. S. Roy, S. Bhattacharjee, S. Das and S. C. Nandy, *A Fast Algorithm for Point Labeling Problem*, Proc. 17th Canadian Conference on Computational Geometry, pp. 155-158, 2005.
37. P. Banerjee, S. Bhattacharjee, S. Sur-Kolay, S. Das and S. C. Nandy, *Fast FPGA Placement using Space-filling Curve*, Proc. Int. Conf. on Field Programmable Logic and Applications (FPL-2005), pp. 415-420, 2005.
38. S. Das, P. P. Goswami and S. C. Nandy, *Recognition of Minimum Width Color-Spanning Corridor and Minimum Area Color-Spanning Rectangle*, Proc. Computational Geometry and Applications (in conjunction with The 2005 Int. Conf. on Computational Science and its Applications), LNCS 3481, pp. 827-837, 2005.
39. S. Roy, S. Das and S. C. Nandy, *Shortest Monotone Descent Path Problem in Polyhedral Terrain*, Proc. 22nd Symp. on Theoretical Aspects of Computer Science (STACS-2005), pp. 281-292, 2005.
40. S. Majumder, S. Sur-Kolay, S. C. Nandy, B. B. Bhattacharya and B. Chakraborty, *Hot Spots and Zones in a Chip: A Geometrician's View*, Proc. Int. Conf. on VLSI Design, pp. 691-696, 2005.
41. B. Aronov, T. Asano, Y. Kikuchi, S. C. Nandy, S. Sasahara and T. Uno, *A Generalization of Magic Squares with Applications to Digital Halftoning*, Proc. 15th Int. Symp. on Algorithms and Computation (ISAAC-2004), pp. 89-100, 2004.
42. G. K. Das, S. C. Ghosh and S. C. Nandy, *Improved Algorithm for Minimum Cost Range Assignment Problem for Linear Radio Networks*, Proc. Int. Workshop. on Distributed Computing (IWDC-2004), LNCS 3326, pp. 412-423, 2004.
43. G. K. Das, S. Das and S. C. Nandy, *Efficient Algorithms for Energy Efficient Broadcasting in Linear Radio Networks*, Proc. Int. Conf. on High Performance Computing (HiPC-2004), LNCS 3296, pp. 420-429, 2004.
44. G. K. Das, S. C. Ghosh and S. C. Nandy, *An Efficient Heuristic Algorithm for 2D h-Hops Range Assignment Problem*, Proc. IEEE Global Telecommunication Conference (GLOBECOM-2004), vol. 3, pp. 1051-1055, 2004.
45. S. Das, P. P. Goswami and S. C. Nandy, *Smallest k point enclosing rectangle of arbitrary orientation*, Proc. 16th Canadian Conference on Computational Geometry, pp. 116-119, 2004.

46. S. Roy, S. Das and S. C. Nandy, *A practical algorithm for approximating shortest weighted path between a pair of points on polyhedral surface*, Proc. Computational Geometry and Applications (in conjunction with The 2004 Int. Conf. on Computational Science and its Applications), LNCS 3045, pp. 42-52, 2004
47. A. Bishnu, S. Das, S. C. Nandy and B. B. Bhattacharya, *An Improved Algorithm for Point Set Pattern Matching under Rigid Motion*, Proc. 5th. Italian Conference on Algorithm and Complexity, LNCS 2653, pp. 28-31, 2003.
48. P. P. Goswami, S. Das and S. C. Nandy, *Simplex range searching and k nearest neighbors of a line segment in 2D*, Proc. Scandinavian Workshop on Algorithmic Theory (SWAT-2002), LNCS - 2368, pp. 69-79, 2002.
49. S. Roy, P. P. Goswami, S. Das and S. C. Nandy, *Optimal Algorithm for a Special Point-labeling Problem*, Proc. Scandinavian Workshop on Algorithmic Theory (SWAT-2002), LNCS - 2368, pp. 110-120, 2002.
50. S. Majumder, S. Sur-Kolay, S. C. Nandy and B. B. Bhattacharya, *Area-(Number-) balanced hierarchy of staircase channels with minimum crossing nets*, Proc. International Symp. on Circuits and Systems (ISCAS 2001), May 6-9, 2001, Sydney, Australia, pp. 395-398.
51. S. C. Nandy, *An efficient k nearest neighbor searching algorithm for a query line*, in Proc. 6th Annual International Conference, on Computing and Combinatorics (COCOON 2000), LNCS 1858, pp. 281-290, Sydney, Australia, July 2000.
52. S. C. Nandy, T. Harayama and T. Asano, *Dynamically Maintaining the Widest k -dense Corridor*, Proc. Italian Conference on Algorithms and Computation, Lecture Notes in Computer Science, LNCS-1767, Springer, pp. 187-198, Italy, 2000.
53. J. Chaudhuri and S. C. Nandy, *Largest empty rectangle among a point set*, Proc. 19th. Int. Conf. on Foundation of Software Technology and Theoretical Computer Science, LNCS 1738, pp. 34-46, India, December 1999.
54. J. Chaudhuri and S. C. Nandy, *Generalized shooter location problem*, Proc. 5th. Annual Int. Conf. on Computing and Combinatorics, Lecture Notes in Computer Science, LNCS-1627, Springer, pp. 389-399, Japan, 1999.
55. S. C. Nandy, *Shattering a set of objects in 2D*, Proc. Canadian Conf. on Computational Geometry, pp. 107-110, British Columbia, Canada, August 1999.
56. S. Das, S. C. Nandy and B. B. Bhattacharya, *High-performance MCM routing - A new approach*, Int. Conference on VLSI Design, IEEE CS Press, pp. 564-569, January 1999.
57. P. Mahalingam, S. C. Nandy, S. Sur-Kolay, B. B. Bhattacharya, *Topological routing of convex polygonal circuit blocks*, Int. Workshop on VLSI Design and Test, Aug. 1998, New Delhi.
58. S. Majumder, S. C. Nandy and B. B. Bhattacharya, *Partitioning VLSI floorplans by staircase channels for global routing*, Int. Conference on VLSI Design IEEE CS Press, pp. 59-64, 1998.
59. P. Mitra and S. C. Nandy *Efficient computation of rectilinear geodesic voronoi neighbor in presence of obstacles*, Proc. 16th. Conf. on Foundation of Software Technology and Theoretical Computer Science, Lecture Notes in Computer Science (LNCS) no. 1180, pp. 76-87, Springer Verlag, December 1996.
60. S. C. Nandy, B. B. Bhattacharya and K. Mukhopadhyaya *Shooter Location Problem*, Proc. of the 8th Canadian Conference on Computational Geometry, CCCG '96, Carleton University Press, pp. 93-98, August 12-15, 1996.
61. P. S. Dasgupta, A. K. Sen, S. C. Nandy and B. B. Bhattacharya, *Geometric bipartitioning problem and its applications to VLSI*, Int. Conference on VLSI Design, IEEE CS Press, pp. 400-405, 1996.
62. S. C. Nandy, A. Sinha and B. B. Bhattacharya *Largest empty isothetic rectangle among a set of non-isothetic obstacles*, Proc. 14th. Conf. on Foundation of Software Technology and Theoretical Computer Science, Lecture Notes in Computer Science (LNCS), no. 880, Springer Verlag, December 1994, pp. 159-170.

63. S. Das, S. C. Nandy and B. B. Bhattacharya *An improved heuristic algorithm for over-the-cell channel routing*, in Proc. International Symposium on Circuits and Systems (ISCAS), IEEE CS Press, pp. 3106-3109, Singapore, June 1991.
64. S. C. Nandy, B. B. Bhattacharya and S. Ray *Efficient algorithm for identifying all maximal isothetic empty rectangles in VLSI layout design*, Proc. 10th. Conf. on Foundation of Software Technology and Theoretical Computer Science, Lecture Notes in Computer Science (LNCS) no. 472, Springer Verlag, December 1990, pp. 255-269.

Patents

1. T. Acharya, B. B. Bhattacharya, A. Biswas, P. Bhowmick, A. Bishnu, S. Das, M. K. Kundu, C. A. Murthy, S. C. Nandy *Fingerprint minutiae matching using scoring techniques*, United States Patent 7,359,532, April 15, 2008.