



UNIVERSITY OF CALCUTTA

FACULTY ACADEMIC PROFILE / CV

1. Full name of the faculty member : Ashok Kumar Das
2. Designation : Professor
3. Specialization : Mathematics (Graph Theory & Combinatorics)
4. Passport size photograph :



5. Contact information: Somwrita Apartment, Flat A2, 3/124/2 Sucheta Nagar , P.O. Haltu, Kolkata-700078. Email: ashokdas.cu@gmail.com

6. Academic qualifications:

College/University from which the degree was obtained	Abbreviation of the degree
North Bengal University	B.Sc. (Hons)
North Bengal University	M.Sc.
North Bengal University	Ph.D.

7. Positions held/holding: Professor

8. Research interests: Graph Theory & Combinatorics

- Intersection graphs, geometrical representation of graphs, ordered set
- Combinatorial graph theory

9. Research guidance :

- Number of researchers awarded M.Phil/Ph. D. degrees : 2
- Number of researchers pursuing M.Phil/Ph.D. : 3

10. Projects :

- *Completed projects* : Minor Research Project of UGC
- *Current projects* : Project Proposal submitted to UGC and SERB

11. Select list of publications :

a) Journals :

1. A characterization of Unit interval bigraphs of open and closed intervals, *Disc. Appl Math*, accepted, pp. 1-20, 2021
2. Mixed Unit interval bigraphs , *Lecture Notes in Computer Science*, Vol. 10743, pp 15-29, 2018
3. Forbidden Subgraphs of Bigraphs of Ferrers dimension 2, *Lecture Notes in Computer Science*, Vol.10398, pp1-12, 2017.
4. **Graphs and Digraphs Represented by Intervals and Circular Arcs, *Discrete Applied Mathematics*, Vol ,228 , pp 41-49, 2017**
5. Forbidden Substructure for Interval Di/ Bigraphs; *Discrete Math.* , Vol. 339(2016), pp. 1028- 1051.
6. Proper interval bigraphs and proper circular bigraphs: A review, *Indian J. Disc. Math.* , Vol.1 No 2(2015), pp. 151-165.
7. New Characterizations of Proper Interval Bigraphs, *AKCE international Journal of Graphs and Combinatorics*, Vol. 12 No. 1 (2015) pp 47-53.

8. New characterizations of Proper interval bigraphs and proper circular arc bigraphs, *Lecture Notes in Computer Science*, 8959, 2015, pp.117-125.
9. Asteroidal Triple of Edges in bichordal graphs, *Journal of Pure Mathematics*, Vol. 29&30, (2013) pp.1-13.
10. Digraphs/ Bigraphs of Ferrers Dimension 2 and Asteroidal triple of edges, *Discrete Math.* Vol. 295, (2005), pp- 191-195.
11. Asteroidal Triple of Edges: A Complete List; Extended abstract in *Electronics Note in Discrete Mathematics*, Vol. 15, 2003, pp. 68-70.
12. Representation of Digraphs using Base Interval; *Journal of Indian Math.Soc.* , Vol. 67, No. 1-4, 2000, pp-107-116.
13. Directable Zeros in a Binary matrix; *J. Ramanujan Math Soc.*, Vol. 11 No. 2, 1996, pp 191-205.

b) Books/book chapters: Nil

c) Conference/seminar volumes:

1. Mixed Unit interval bigraphs , *Lecture Notes in Computer Science*, Vol. 10743, pp 15-29, Springer, Proceedings of the Fourth International Conference on Algorithmic and Discrete Applied Mathematics, (CALDAM issue, 2018), IIT Guwahati, 2018.
2. New characterizations of Proper interval bigraphs and proper circular arc bigraphs, *Lecture Notes in Computer Science*, 8959, Springer, Proceedings of the First International Conference on Algorithmic and Discrete Applied Mathematics, (CALDAM 2015), IIT Kanpur, 2015, pp.117-125.
3. Proper interval bigraphs and proper circular bigraphs: A review, *Indian J. Disc. Math.* , Vol.1 No. 2(2015), pp. 151-165

d) Other publications: Nil

12. Membership of Learned Societies:

Life member of Calcutta Mathematical Society

13. Patents : Nil

14. Invited lectures delivered:

- 1) National Level Workshop on Graph Theory: Algebraic & Algorithmic Aspect, Aliah University, Kolkata, 19-24 Dec, 2016.
- 2) National Workshop on Graph Theory, Coding Theory and Cryptography, NIT, Durgapur, 7-13 April, 2014.

3) National Workshop and Conference on Discrete Mathematics and Applications, Jadavpur University, 10-14 March, 2014.

4) National Seminar on Mathematics, Asutosh Mookherjee Memorial Institute, Kolkata, 8-9 November, 2013.

15. Awards : Nil

16. Other notable activities:

a) Foreign Visit: (i) Visited Centre de Recherches Mathématiques, Université de Montréal, Canada and presented a paper in the Second Canadian Discrete and Algorithmic Mathematics Conference 25-28 May (2009) and also participated in a mini symposium on interval bigraphs in 2009.

(ii) Visited Georgia State University, Atlanta, USA and presented a paper in the SIAM conference on Discrete Mathematics, 6th June to 10th June, 2016, funded by SERB (under travel support scheme).

b) Reviewer of the Journals:

1. Discrete Mathematics
2. Graphs and Combinatorics
3. Discrete Applied Mathematics
4. Mathematical Reviews.

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Ashok Kumar Das

Signature of the faculty member

Date :