



## UNIVERSITY OF CALCUTTA

### FACULTY ACADEMIC PROFILE / CV

1. Full name of the faculty member : Ashok Kumar Das
2. Designation : Associate 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: Associate Professor

## 8. Research interests: Graph Theory & Combinatorics

- Intersection graph, geometrical representation of graph, ordered set
- Combinatorial graph theory
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## 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, *J. Graph Theory*, accepted, pp. 1-19, 2018
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 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 Mathematiques, Universite de Montreal, 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, 6<sup>th</sup> June to 10<sup>th</sup> 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.