

Name and Designation



**Dr. Amiya Biswas**  
(Assistant Professor of Mathematics, Durgapur Government College)

Academic Qualifications

M. Sc. (I.I.T. Delhi), Ph.D. (The University of Burdwan)

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Area of Interest

Combinatorial Optimization, Number Theory, Algebra and Coding Theory.

i) Teaching

Number Theory, Algebra, Analysis, Linear Programming.

ii) Research

Combinatorial Optimization, Soft Computing, Multi-objective Optimization, Interval Analysis

Publication: Papers /Articles in Journals

International:

- 1) **Amiya Biswas**, Sankar Kumar Roy and Sankar Prasad Mondal (2022). Evolutionary algorithm based approach for solving transportation problems in normal and pandemic scenario, *Applied Soft Computing*, 129, 109576.
- 2) **Amiya Biswas**, Siba Prasada Tripathy and Tandra Pal (2022). On some multi-objective covering salesman problem, *Neural Computing and Applications* (Accepted).
- 3) **Amiya Biswas**, Leopoldo Eduardo Cárdenas-Barrón, Ali Akbar Shaikh Shaikh; Avijit Duary; Armando Céspedes-Mota (2022). A study of multi-objective restricted multi-item fixed charge transportation problem considering different types of demands, *Applied Soft Computing* (Accepted).
- 4) Siba Prasada Tripathy, **Amiya Biswas** and Tandra Pal (2021). A multi-objective covering salesman problem with 2-coverage, *Applied Soft Computing* (Accepted).
- 5) Tanmoy Banerjee, **Amiya Biswas**, Ali Akbar Shaikh and Asoke Kumar Bhunia (2021). An Application of Extended NSGA-II in Interval Valued multi-objective Scheduling Problem of Crews, *Soft Computing*, 26, 1261–1278.
- 6) Mostafijur Rahaman, Sankar Prasad Mondal, Shariful Alam, Najeeb Alam Khan & **Amiya Biswas** (2021). Interpretation of exact solution for fuzzy fractional non-homogeneous differential equation under the Riemann–Liouville sense and its application on the inventory management control problem, *Granular Computing*, 6, 953-976.
- 7) **Amiya Biswas** and Tandra Pal (2020). A comparison between metaheuristics for solving a capacitated fixed charge transportation problem with multiple objectives, *Expert Systems with Applications*, 170, 114491.
- 8) Rahaman, M., Mondal, S. P., Algehyne, E. A., **Biswas, A.** and Alam, S. (2021). A method for solving linear difference equation in Gaussian fuzzy environments, *Granular Computing*, 1-14.
- 9) Ali Akbar Shaikh, Gobinda Chandra Panda, Md. Al-Amin Khan, Abu Hashan Md Mashud and **Amiya Biswas**. An Inventory model for deteriorating items with preservation facility of ramp type demand and trade credit, *International Journal of Mathematics in Operational Research*, 17(4), 514-551.
- 10) **Amiya Biswas**, Ali Akbar Shaikh, Seyed Taghi Akhavan Niaki (2019). Multi-objective non-linear fixed charge transportation problem with multiple modes of transportation in crisp and interval environments, *Applied Soft Computing Journal*, 80, 628-649, I.F. 3.907.
- 11) **Amiya Biswas**, Asoke Kumar Bhunia and Ali Akbar Shaikh (2018). Multi-objective unbalanced assignment problem with restriction of jobs to agents via NSGA-II, *International Journal of Mathematics in Operational Research*, 13(1), 107-127.

	<p>12) Asoke kumar Bhunia, <b>Amiya Biswas</b> and Subhra Sankha Samanta (2017). A genetic algorithm based approach for unbalanced assignment problem in interval environment, <i>International Journal of Logistics Systems and Management</i>, 27(1), 62-77.</p> <p>13) Asoke kumar Bhunia, <b>Amiya Biswas</b> and Laxminarayan Sahoo (2015). Comparison of different approaches for Redundancy Allocation problem in interval environment via genetic algorithm, <i>Communications in Dependability and Quality Management</i>, 18(4), 33-51.</p> <p>14) Asoke kumar Bhunia, <b>Amiya Biswas</b> and Nabendu Sen (2014). An application of extended elitist non-dominated sorting Genetic Algorithm in multi-objective linear programming problem of tea industry with interval objectives, <i>Uncertain Supply Chain Management</i>, 2(4), 245-256.</p> <p><b>National:</b></p> <p>1) Asoke Kumar Bhunia and <b>Amiya Biswas</b>, Restricted unbalanced assignment problem with multiple objectives via NSGA-II, <i>B.N. Seal Journal of Science, Vol. VII, Issue. September 2015</i>.</p>
<p><b>Publication: Chapter in Books</b></p>	<p>1. Asoke Kumar Bhunia, <b>Amiya Biswas</b> and Ali Akbar Shaikh, Extended non-dominated sorting Genetic Algorithm (ENSGA-II) for multi-objective optimization problem in interval environment, <i>Multi-Objective Optimization: Evolutionary to Hybrid Framework</i>, Springer Nature Singapore Pte Ltd., 152 Beach Road, #21-01/04 Gateway East, Singapore 189721, Singapore. 215-241, 2018.</p> <p>2. Asoke Kumar Bhunia and <b>Amiya Biswas</b>, Genetic Algorithm based approach for Unbalanced Assignment Problem”, Quality, Reliability, Infocom Technology and Industrial Technology Management (written jointly with Asoke Kumar Bhunia), <b>I. K. International Publishing House Pvt. Ltd.</b>, 242-255, 2015.</p>
<p><b>Publication: Books</b></p>	<p>Nil</p>
<p><b>Paper Presented in Seminar / Conference</b></p>	<p>1. Presented a paper entitled “Non-linear fixed charge transportation problem with multiple modes of transportation” in <b>National Seminar on Mathematical Sciences</b> organized by Department of Mathematics, The University of Burdwan held during 09-11 January, 2020.</p> <p>2. Presented a paper entitled “NSGA-II based approach for solving multi-objective unbalanced assignment problem with restriction of jobs to agents in interval environment” in <b>UGC-CPE assisted Inter-disciplinary (Science) National Seminar on “Frontiers in Science and Technology towards National Development”</b> organized by A.B.N. Seal College Cooch Behar during April 10-11, 2016.</p>

<b>Seminar/Conferences / Symposium / Workshop Attended</b>	Sl No.	Date	Workshop/ Seminar	Organized by	Sponsored by
	1.	10th & 11th April, 2016	Frontiers in Science and Technology towards National Development	A B N Seal College	U G C-CPE sponsored International Seminar
	2.	29th – 31st August, 2016	3 Day Workshop on LaTeX	Department of Computer Science, Coochbehar College, Coochbehar in collaboration with Spoken Tutorial, IIT- Bombay	Coochbehar College, West Bengal
<b>Webinars/ Faculty development programme Attended</b>	Sl No.	Date	Title of webinar/ Faculty development programme	Organized by	
	1.	13th - 14th August, 2020	A two-day International Webinar on ALGEBRA, ANALYSIS & TOPOLOGY	Bankura University	
	2.	17th - 19th August, 2020	MatLab and it's Applications	Bishop Cotton Women's Christian College	
	3.	21st August, 2020	Application of Mathematics on Epidemiology	Department of Mathematics, Vivekananda Satavarshiki Mahavidyalaya, Manikpara, Jhargram	
	4.	24-29 August, 2020	6-Day National Level Hands-on E-workshop on Basics of C Programming and Python for Beginners	Department of Information Science & Engineering	
	5.	6 <sup>th</sup> September, 2020	History of Mathematics	Calcutta Mathematical Society	
	6.	9 <sup>th</sup> -13 <sup>th</sup> September, 2020	Machine Learning: Theory and Applications (MLTA-2020)	Jointly organized by Department of Physics, Instrumentation and Control Engineering & Industrial and Production Engineering, Dr. B R Ambedkar National Institute of Technology Jalandhar Funded by TEQIP-III	
<b>Refresher Course/Orientation Programme Participated</b>	<ol style="list-style-type: none"> <li>1. Participated in the 109<sup>th</sup> Orientation Programme from 15<sup>th</sup> February, 2018 to 14<sup>th</sup> March, 2018 organized by HRDC, The University of Burdwan, Burdwan.</li> <li>2. Participated in the 1<sup>st</sup> Refresher Course in Mathematics and Computing from July 24, 2018 to August 13, 2018 organized by</li> </ol>				

	HRDC, The University of Burdwan, Burdwan.
<b>Award/Prize/National Recognition</b>	
<b>Research Project undertaken</b>	
<b>Research training undertaken</b>	
<b>Membership in professional Organization</b>	Life member of Soft Computing Research Society (SCRC)