FULGA Cristinca

CURRENT POSITION: Professor

AFFILIATION/DEPARTMENT: Department of Applied Mathematics

ORCID RESEARCHER ID: https://orcid.org/0000-0002-6880-2697

URL FOR PERSONAL WEBSITE:

LINKEDIN PROFILE:

EMAIL: fulga@csie.ase.ro

PROFILE

Cristinca Fulga is a professor of Mathematics, recognized for her scientific results and dedication as a teacher. With extensive experience in coordinating research, she has successfully led research teams to obtaining important scientific results. As a Professor at the Department of Applied Mathematics of the Bucharest University of Economic Studies, Cristinca Fulga combines the academic rigor with practical insights of Mathematics, showing to each new generation of students the beauty of it and its wide applications, thus inspiring them to apply the various methods and techniques as business leaders.

EDUCATION

Habilitation	-
Post-Doc	-
PhD (Doctorate)	**2005** - PhD in Mathematics - Statistics, Probability and Operations Research
Master	-
Bachelor	**1983** - Mathematics, Faculty of Mathematics and Computer Science, Bucharest University, Romania

PROFESSIONAL TRAINING

Sept. 1995 - Oct. 1995, INDE MBA Bucharest, Post-graduate courses organized by the University of Orleans in collaboration with A.S.E. Bucharest

Oct. 1995 - Dec. 1995, INDE MBA Bucharest, Doctoral seminars within the "Formations des formateurs" program for the training of teaching staff in the Bucharest University of Economic Studies for the relocation of DESS "Finance et Control de Gestion" - University of Orleans, France.

Jan. 1996 - June 1996, University of Orleans, France, Specialization courses within the in-depth study program in "Finance and Control de Gestion" organized at the University of Orleans, France, ending with the public support of the report entitled "Modeling by stochastic processes of the financial market".

1997 Postgraduate courses of the "Optimization and Applied Statistics" Summer School, Constanta, jointly organized by "Ovidius" University, Constanta, Faculty of Mathematics, University of Bucharest and University of Paris I - Sorbonne, Paris, France.

1998 - 2005 Doctoral school in Mathematics, Faculty of Mathematics and Computer Science, Bucharest University, Romania.

ACADEMIC EXPERIENCE

1992 - present: Assistant Professor, Lecturer, Associate Professor, Professor.

Courses Taught:

- Actuarial Statistics, Master Actuarial Techniques, Faculty of Finance, Insurance, Banking and Stock Exchange
- Quantitative Methods for Risk Management, Master Actuarial Techniques, Faculty of Finance, Insurance, Banking and Stock Exchange
- Mathematical Programming and Business Optimization, Master Business Analytics, Faculty of Business Administration in Foreign Languages (FABIZ)
- Optimization Methods for Decision-Making Processes, Master Business Administration in Tourism (AAT), Faculty of Business and Tourism

- Mathematics, Faculty of Theoretical and Applied Economics
- Mathematics for economists, I, Faculty of Business Administration in Foreign Languages (FABIZ) – French
- Simulation Methods, Master Actuarial Techniques, Faculty of Finance, Insurance, Banking and Stock Exchange
- Optimization Methods for Decision-Making Processes under Uncertainty, Faculty of Business Administration in Foreign Languages (FABIZ) – French
- Mathematics, Faculty of Management and Faculty of Business and Tourism – both courses in English
- Probability theory and statistics
- Modeling and managing risks
- Financial mathematics

RESEARCH PROFILE

Main area of research focus:

- Risk measures theory
- Risk optimization
- Stochastic programming
- Applications of stochastic optimization techniques and risk theory in Closed-Loop Supply Networks Design and Planning
- Multi-objective programming
- Generalized convexity and generalized monotonicity
- Applications of optimization techniques in finance and engineering sciences
- Multi-Criteria Decision-Making, Analytic Hierarchy Process, DEMATEL

LIST OF PUBLICATIONS

List of articles published in peer reviewed journals:

1. Toma A., Fulga, C. (2018) Robust Estimation for the Single Index Model Using Pseudodistances, Entropy, 20(5), 374-393, ISSN: 1099-4300; DOI: 10.3390/e20050374, https://doi.org/10.3390/e20050374
2. Fulga, C. (2017) Integrated decision support system for portfolio selection with enhanced behavioural content, Economic Computation and Economic Cybernetics Studies and Research, ISSN: 0424-267X, 51(3), 127-142, http://ecocyb.ase.ro/Articles2017_3.htm
3. Fulga, C. (2016) Portfolio optimization under loss aversion, European Journal of Operational Research, ISSN: 0377-2217, Vol. 251, Nr. 1, pp. 310-322, DOI: 10.1016/j.ejor.2015.11.038, http://dx.doi.org/10.1016/j.ejor.2015.11.038.
4. Fulga, C. (2016) Portfolio optimization with disutility-based risk measure, European Journal of Operational Research, ISSN: 0377-2217, Vol. 251, Nr. 2, pp. 541–553 DOI: 10.1016/j.ejor.2015.11.012,

http://dx.doi.org/10.1016/j.ejor.2015.11.012.

5. Fulga, C. (2015) Integrated bi-criteria decision support system for portfolio selection, Journal of Decision Systems, 24(2), 159-177, DOI: 10.1080/12460125.2015.1046684, http://www.tandfonline.com/doi/full/10.1080/12460125.2015.1046684, indexată BDI: Scopus.
6. Fulga, C. (2013) Convexification Technique and Portfolio Optimization, Studies in Informatics and Control, ISSN: 1220-1766, Vol. 22, Issue: 4, pp. 285-290, http://sic.ici.ro/?page_id=368.
7. Popescu, C., Fulga, C. (2011) Possibilistic Optimization with Application to Portfolio Selection, Proceedings of Romanian Academy - Series A: Mathematics, Physics, Technical Science, Information Science, ISSN: 1454-9069, Vol. 12, Issue: 2, pp. 88-94, http://www.acad.ro/sectii2002/proceedings/proc_pag2011_n02.htm.
8. Dedu, S., Fulga, C. (2011) Value-at-Risk estimation comparative approach with applications to optimization problems, Economic Computation and Economic Cybernetics Studies and Research, ISSN: 0424-267X, Volume: 45, Issue: 1, 127-142.
9. Fulga, C., Preda, V. (2009) Nonlinear Programming with E-Preinvex and Local E-Preinvex Functions, European Journal of Operational Research, ISSN: 0377-2217, Vol. 192 (3), pp. 737-743, doi:10.1016/j.ejor.2007.11.056, http://www.sciencedirect.com/science/article/pii/S0377221707011538.
10. Fulga, C., Dedu, S., Şerban, F. (2009) Portfolio Optimization with Prior Stock Selection, Economic Computation and Economic Cybernetics Studies and Research, ISSN: 0424-267X, Vol. 43 (4), pp. 157-172.
11. Fulga, C., Şerban, F. (2008) Multi-item Inventory Model with Constant Rate of Deterioration and Safety Stock, Economic Computation and Economic Cybernetics Studies and Research, ISSN: 0424-267X, Vol. 42, Nr. 3-4, pp. 157-170.
12. Fulga, C., Preda, V. (2007) On Optimality Conditions for Multiobjective Optimization Problems in Topological Vector Space, Journal of Mathematical Analysis and Applications, ISSN: 0022-247X, Vol. 334(1), 2007, pp. 123-131, doi:10.1016/j.jmaa.2006.12.047, http://www.sciencedirect.com/science/article/pii/S0022247X06014260.
13. Fulga, C., Pop, B. (2007) Portfolio Selection with Transaction Costs, Bulletin Mathématique de la Société des Sciences Mathématiques de Roumanie, ISSN : 1220-3874, Tome 50(98), no. 4, pp. 317- 330, http://ssmr.ro/bulletin/volumes/50-4/node1.html.
14. Fulga, C. (2007) The Partner Selection Problem in a Virtual Enterprise, Economic Computation and Econ Cybernetics Studies and Research, ISSN: 0022-247X, 41(3-4), 193-202.
15. Fulga, C. (2006) Local Convexification of the Lagrangian Function for Nonlinear Nonconvex Optimization, Bulletin Mathématique de la Société des Sciences Mathématiques de Roumanie, ISSN : 1220-3874, Tome 49 (97), no. 3, pp. 239-246, http://ssmr.ro/bulletin/volumes/49-3/node1.html.
16. Fulga, C. (2006) A Sequential Quadratic Programming Technique with Two-Parameter Penalty Function, Bulletin Mathématique de la Société des Sciences Mathématiques de Roumanie, ISSN 1220-3874 Tome 49(97), no. 4, pp. 335- 345, http://ssmr.ro/bulletin/volumes/49-4/node1.html.
17. Fulga, C. (2006) Saddle Points Generation in Nonlinear Programming Problems, Economic Computation and Economic Cybernetics Studies and Research, ISSN: 0424-267X, Vol. 40, Nr. 3-4, pp.

169-180. http://ecocyb.ase.ro/contents2006.pdf

18. 19) Fulga, C. (2005) An Extension of the Minimum Norm Problem, Mathematical Reports, ISSN: 1582-3067, Vol. 7(57), No. 1, 2005, pp. 45-51. http://www.imar.ro/journals/Mathematical_Reports/home_page.html
19. Preda, V., Fulga, C. (2005) Duality for Minimum Matrix Norm Problems, Proceedings of Romanian Academy - Series A: Mathematics, Physics, Technical Science, Information Science, ISSN: 1454-9069, Vol. 6, No. 1, pp. 25-31. https://acad.ro/sectii2002/proceedings/proc_pag_nra.htm
20. Fulga, C. (2003) On Minimum Norm Problems, Analele Universităţii Bucureşti, Seria Matematică, Anul LII, Nr. 2, pp. 175-180.

List of papers published in conference proceedings:

1. Fulga, C. (2014) Portfolio optimization and preferences, Proceedings of the GDN2014 Joint International Conference of the INFORMS GDN Section and the EURO Working Group on DSS, 10-13 Iunie 2014, Toulouse, Franţa, Eds: P. Zaraté, G. Camilleri, D. Kamissoko, F. Amblard, Publ. Univ. Toulouse 1 Capitole, pp. 301-308, ISBN: 978-2-917490-27-3.
2. Fulga, C., Dedu, S. (2012) Mean-Risk Portfolio Optimization with PCA Stock Selection, Proceedings of the International Workshop Stochastic Programming for Implementation and Advanced Applications STOPROG 2012, 3-6 Iulie 2012, Neringa, Lituania, Eds. Leonidas Sakalauskas, Asgeir Tomasgard, Stein W. Wallace, Publ. The Association of Lithuanian Serials Vilnius: Technika, DOI: 10.5200/stoprog.2012.07, http://www.moksloperiodika.lt/STOPROG_2012/abstract/007.html, pp. 37-42, ISBN: 978-609-95241-4-6.
3. Fulga, C. (2011) Mean-Risk Portfolio Optimization with AHP-based Prior Stock Selection, Proceedings of the International Symposium on the Analytic Hierarchy Process ISAHP 2011, 15-17 Iunie 2011, Sorrento, Italia, pp. 60-62, Editors: F. De Felice, E. Esposito, A. Petrillo, T.L. Saaty, Sorrento, Italy, June 15-18, ISSN 1556-8296, ISBN: 978-88-906147-0-5.
4. Fulga, C., Dedu, S. (2010) A New Approach in Multi-Objective Portfolio Optimization using Value-at-Risk based Risk Measure, Proceedings of the 2nd IEEE International Conference on Information and Financial Engineering IEEE ICIFE 2010, 17-19 Sept. 2010, Chongqing, China, pp. 765-770, DOI: 10.1109/ICIFE.2010.5609467, ISBN: 978-1-4244-6927-7.
5. Fulga, C. (2009) Dynamic Model for Portfolio Optimization, The International Multi-Conference of Engineering and Computer Sciences 2009 – International Conference on Operations Research ICOR 2009, 18-28 Martie 2009, Hong-Kong, Lecture Notes in Engineering and Computer Science, Editors: S. I. Ao, O. Castillo, C. Douglas, D. Dagan Feng, J.-A Lee, Publ: Newswood Ltd. I.A.Eng., Vol. 2, pp. 2081-2086, ISBN: 978-988-17012-7-5.
6. Fulga, C. (2009) Dynamic Portfolio Optimization for Utility-Based Models, Proceedings of the 2009 International Conference on Information and Financial Engineering, 17-20 April 2009, Singapore, pp. 117-121, ISBN-13: 978-0-7695-3606-4.
7. Fulga, C. (2009) Multistage Portfolio Optimization, Proceedings of the XIII International Conference on

Applied Stochastic Models and Data Analysis ASMDA, 6-9 Iulie 2009, Vilnius, Lithuania, pp. 497-502, Eds: L. Sakalauskas, C. Skiadas, E. K. Zavadskas, Vilnius Gediminas Technical University Press, ISBN: 978-9955-28-463-5.

8. Fulga, C. (2009) Stochastic Models for Portfolio Management with Minimum Transaction Lots, Proceedings of the International Conference on Economic Cybernetic Analysis: Global Crisis Effects on Developing Economies, Vol. 1, pp. 631-637, Editura ASE, ISBN: 978-606-505-219-2.
9. Fulga, C., Dedu, S. (2009) A Comparative Approach in Risk Management using VaR and CVaR Risk Measures, Proceedings of the International Conference on Economic Cybernetic Analysis: Global Crisis Effects on Developing Economies, Vol. 2, pp. 715-723, Editura ASE, ISBN: 978-606-505-219-2.
10. Fulga, C. (2008) Decomposition Technique for Multiple Criteria Problems, Proceedings of the 9th Asia Pacific Industrial Engineering & Management Systems Conference APIEMS 2008, pp. 1101-1107, ISBN 978-979-18925-0-6.
11. Fulga, C., Pop, B. (2008) Single Period Portfolio Optimization with Fuzzy Transaction Costs, Proceedings of the EURO Conference on Continuous Optimization and Knowledge-Based Technologies EurOPT 2008, May 20-23, Editors: L. Sakalauskas, G.W. Weber, E.K. Zavadskas, pp. 125-131, Publ. House Vilnius Technika, ISBN: 978-9955-28-283-9.
12. Fulga, C., Pop, B. (2007) Single-Period Portfolio Selection with Transaction Costs, Proceedings of the International Conference Trends and Challenges în Applied Mathematics ICTCAM 2007, Eds: G. Paltineanu, E. Popescu, I. Toma, Ed. Matrix Rom, Bucureşti, pp. 189-193, ISBN: 978-973-755-283-9.
13. Fulga, C. (2005) On Exact Penalty Function for Interval Constraints Nonlinear Programming Problem, Proceedings of The 7th Balkan Conference on Operational Research, Eds: V. Preda, S. Sburlan, A. Ştefănescu, A. Bătătorescu, Editura SC EUROGEMA EXIM Bucureşti, pp. 109-115, ISBN 973-86979-7-2.
14. Fulga, C. (2000) Penalty Concepts by means of the Separation Functions in the Image Space, Analele Univ. Dunărea de Jos, Galaţi, Seria Matematică, Vol. I, Fasc. II, Suplim. Tom XVI, pp.115-121, Eds: T. Buhaescu, J. Crînganu, M. Baroni, ISSN: 1221-1531.

List of books & book chapters:

1. Fulga, C., Dedu, S., Popescu, C. (2011) Managementul riscului. Applicaţii în optimizarea portofoliilor, Editura ASE, Bucureşti, ISBN 978-606-505-473-8, Numărul total de pagini al publicaţiei: 172, Coordonator: C. Fulga. Autori cu contribuţie egală în realizarea capitolelor 1, 2, 3, 4, şi 5: C. Fulga si S. Dedu. Autori cu contribuţie egală în realizarea capitolelor 6 şi 7: C. Fulga si C. Popescu. Numărul de pagini care aparţin candidatului: 172.
2. Fulga, C. (2010) Probabilitati cu aplicatii in managementul portofoliilor, Editura ASE, Bucureşti, ISBN 978-606-505-335-9.
3. Fulga, C. (2008) Modele matematice de minimizare a normei, Editura Universităţii din Bucureşti, ISBN 978-973-737-488-2, Numărul total de pagini al publicaţiei: 187, Numărul de pagini care aparţin candidatului: 187 (autor unic).
4. Fulga, C. (2008) Teoria probabilitatilor – curs introductiv. Editura ASE, Bucureşti, ISBN 978-606-505-

117-1.
5. Vasiliu D.P., Fulga, C. (1994) Note de Curs, Editura ELMA-H.
6. Developments in Statistical Information Theory Based on Entropy and Divergence Measures (2019) Editor Leandro Pardo, ISBN 978-3-03897-936-4 (Pbk); ISBN 978-3-03897-937-1, https://doi.org/10.3390/books978-3-03897-937-1, Toma, A., Fulga, C., Robust Estimation for the Single Index Model using Pseudodistances, pp. 223-242. https://www.mdpi.com/books/pdfview/book/1298
7. Fulga, C. (2009) Dynamic Model for Portfolio Optimization, Book Series: Lecture Notes in Engineering and Computer Science, IMECS 2009: International MultiConference of Engineering and Computer Sciences, Vol. 2, pp. 2081-2086, Editors: S. I. Ao, O. Castillo, C. Douglas, D. Dagan Feng, J.-A Lee, Publ: Newswood Limited, International Association of Engineers, ISBN: 978-988-17012-7-5.
8. Fulga, C. (2007) Decentralized Cooperative Optimization for Multi-Criteria Decision Making, Book Series: Lecture Notes in Control and Information Sciences, Advances in Cooperative Control and Optimization, Proceedings of the 7th International Conference on Cooperative Control and Optimization CCO 2007, Editors: Panos M. Pardalos, Robert Murphey, Don Grundel, Michael J. Hirsch, Vol 369, pages 65-80, Springer Berlin/Heidelberg, ISBN: 978-3-540-74354-5.

Case Studies:

1. *Fujikawa H., Fulga, C. (2019) Status Quo of Supply Chain Management-Supply Chain Risk Management, https://api.semanticscholar.org/CorpusID:209350266*

SCIENTIFIC COMMITTEES OF ACADEMIC JOURNALS / CONFERENCES, REVIEW

European Journal of Operational Research, Elsevier,
Journal of the Operational Research Society, Taylor and Francis,
Optimization - A Journal of Mathematical Programming and Operations Research, Taylor and Francis,
Central European Journal of Operations Research, Springer,
Numerical Functional Analysis and Optimization, Taylor and Francis,
Computers & Mathematics with Applications, Elsevier,
International Journal of Computer Mathematics, Taylor and Francis,
Journal of Inequalities and Applications, Springer.

PROJECTS

PRINCIPAL INVESTIGATOR - *Multi-criteria Decision Making Modeling under Uncertainty with Applications in Portfolio Management, Grant No 844, code 1778 / 2008, PN II, IDEI, Funding period: 2009 – 2011 (36 months), Funding Agency: The National Council for Research and Development (CNCS - UEFISCDI), Award: 238000 EUR, Web page: http://demamod.ase.ro/en%20index.html*

PRINCIPAL INVESTIGATOR - *Research internship at Tokyo University of Science: Advanced Methods and Techniques in Supply Chain Management with Focus on Modeling and Managing Specific Risks, Funding*

period: November 2017, Funding agency: CNCS-UEFISCDI, Award: 4600 EURO, Project identifier: PN-III-P1-1.1-MC-2017-0254.

MEMBER OF THE RESEARCH TEAM - *Portfolio selection models and applications, Grant number: 79/05.10.2011, grant code: PN-II-ID-PCE-2011-3-0908, Oct. 2011 - Sept. 2016, Contract between Gheorghe Mihoc - Caius Iacob Institute of Mathematical Statistics and Applied Mathematics of the Romanian Academy and the Romanian National Authority for Scientific Research ANCS-UEFISCDI, Director: CS I. Marius RĂDULESCU.*

MEMBER OF THE RESEARCH TEAM - *Flexible Statistical Modeling and Robust Analysis of Financial Data, Grant code: PN-II-RU-TE-2012-3-0007, 1 May 2013 - 30 Sept. 2016, Contract between the Bucharest University of Economic Studies and the Romanian National Authority for Scientific Research ANCS-UEFISCDI, Director: Prof. Aida TOMA.*

MEMBER OF THE RESEARCH TEAM - *Modern system of indicators, models and policies for measuring and supporting initial and continuous training of human resources in terms of quality of education and stimulation of creative potential, Grant No 91-005/18.09.2007, 2007- 2010, ASE Bucharest, CNMP, Project manager: Prof. Ion Gh. ROŞCA. Award: 1851200 lei.*

MEMBER OF THE RESEARCH TEAM - *Correlations between the socio - economic development of the regions and the informal economy: estimates, analyzes and scenarios, Grant nr. 91-054 / 18.09.2007, 2007- 2010, ASE Bucharest, CNMP, Director de proiect: Prof. Tudorel ANDREI, Valoarea proiectului: 1285000 lei.*

MEMBER OF THE RESEARCH TEAM - *The impact of FDI on competitiveness and economic growth during the assertion of Romania as EU member using intelligent techniques, 2007- 2008, ASE Bucharest, CNCSIS, Project manager: Prof. Dr. Stelian STANCU, Award: 100000 lei.*

MEMBER OF THE RESEARCH TEAM - *Increasing security of energy supply (E-ENERGY), Grant No. 42-68/18.09.2007, 2007- 2010, ASE Bucharest, CNMP, Project manager A.S.E.: Prof. Dr. Stelian STANCU, Award: 500000 lei.*

MEMBER OF THE RESEARCH TEAM - *International movement of labor from Romania to the European Union. Impact on the flow of Romania Romania-EU workforce, Grant No. 91-045/18.09.2007, 2007- 2010, ASE Bucharest, CNMP, Project manager: Prof. Dr. Dumitru MARIN, Award: 1285000 lei.*

OTHER RELEVANT PROFESSIONAL EXPERIENCE

Member of the Editorial Board: International Journal of Mathematics and Statistics, ISSN 0974–7117 (Print), ISSN 0973-8347 (Online), http://www.ceser.in/ceserp/index.php/ijms.

Co-editor Special issue 2021, EURO 2019: Games in economics, finance and biology. Journal of Dynamics & Games, 2021, 8 (2), doi: 10.3934/jdg.2021016, https://www.aimsciences.org/journal/2164-6066/2021/8/2

PROFESSIONAL ASSOCIATIONS AND MEMBERSHIPS

EURO - The Association of European Operational Research Society

EUROPT - The Continuous Optimization Working Group of EURO
MCDM - The International Society on Multiple Criteria Decision Making
EURO - The Working Group on Stochastic Programming, Founding member
IAENG - The International Association of Engineers
IACSIT - The International Association of Computer Science and Information Technology
WGGC - The Working Group on Generalized Convexity
SPSR - The Romanian Society of Probability and Statistics
CCMAFA - The Fundamental and Applicative Advanced Mathematical Research Center

GRANTS AND HONORS

2007 - Diploma of excellence for scientific research, Bucharest University of Economic Studies
2017 - Diploma OPERA OMNIA for excellence in scientific research, Bucharest University of Economic Studies
2019 - Diploma OPERA OMNIA for excellence in scientific research, Bucharest University of Economic Studies

INTERNATIONAL EXPERIENCE / ACADEMIC ENGAGEMENT

INVITED LECTURES, November 2017
"Risk Management in Supply Chains", Tokyo University of Science, Department of Management, School of Management Tokyo, Japan, and
"New Approaches to Risk Management in Reverse Supply Chains", Sophia University, Department of Information and Communication Sciences, Faculty of Science and Technology.
INVITED LECTURE, October 2018, "Risk preferences modelling with application to portfolio optimization
, The IXth Moscow International Conference on Operations Research,
22-27 October 2018, Lomonosov Moscow State University, Russia.
INVITED LECTURE, November 2019, "Modelling, measuring, and managing risk in supply chains", Hosei University, Hosei Business School of Innovation Management, Tokyo, Japan.
INVITED LECTURE, November 2019, "Modelling, measuring, and managing risk in supply chains for the case of risk-averse / loss-averse decision makers", Sophia University, Department of Information and Communication Sciences, Faculty of Science and Technology, Tokyo, Japan.
INVITED LECTURE, December 2019, "Value at Risk estimation models based on higher order moments with application to portfolio optimization", Global Conference on Advances in Business and Social Sciences, Showa University, December 1-3, 2019, Tokyo, Japan.

LANGUAGES

English – Proficiency
French - Proficiency

SKILLS

Research skills: In-depth knowledge in pure and applied mathematics, having the ability to tackle unsolved problems and develop new theories or methods and also skills to secure funding through well-crafted research proposals. And also skills for Project Management in order to lead and organize research projects effectively. Proficiency in evaluating and synthesizing existing research, critical thinking for evaluating assumptions, results, and methodologies rigorously. Aability to work with a team with the goal of writing and publishing high-quality research papers in peer-reviewed journals.

Technical and analytical skills: Developing models to represent real-world phenomena or abstract problems and utilizing statistical or computational techniques to analyze datasets. Solid knowledge of numerical methods and algorithms and attention to detail when performing calculations, or writing proofs.

Teaching skills: Developing and updating courses that meet institutional and accreditation standards. Preparing and delivering well-structured lectures by using creative approaches to captivate and inspire students, and also adjusting teaching methods based on class dynamics and student needs.Crafting exams, assignments, and projects that effectively evaluate student understanding.

Mentoring skills: Guiding undergraduate and graduate students on academic progress, career paths, and research projects. Helping students design and execute theses or dissertations by offering constructive and actionable feedback to mentees.

Communication skills: Writing clear, concise, and rigorous research papers, proposals, and lecture notes.

Delivering engaging and comprehensible lectures, conference talks, and seminars. Simplifying complex ideas by explaining abstract mathematical concepts in an accessible manner for different audiences.