Curriculum Vitae

Dr. Indira P. Debnath
Assistant Professor,
Department of Applied Mathematics and Humanities,
S.V. National Institute of Technology Surat, India

E-mail: ipd@amhd.svnit.ac.in

Mobile: +91-8126611249

Objective

- *To accept all challenges and assignments with responsibility and accomplish them with sincerity by well-coordinated teamwork, eventually achieving the entrusted targets, which help me, grow progressively in my field.*

Personal Details

- ***Name:*** *Indira Priyadarshini Debnath*
- ***Date of Birth:*** *26/June/1989*
- ***Fathers Name:*** *Mr. Narayan Chandra Debnath*
- ***Mothers Name:*** *Mrs. Juthi Debnath*
- ***Permanent Address:*** *Rabindranagar, W/No 3, P. O and District:-Kokrajhar, Kokrajhar, Assam, Pin 783370, India.*
- ***Present Address:*** *S. V. National Institute of Technology Surat, Ichchhanath Surat-Dumas Road, Keval Chowk, Surat Gujarat, 395007 India.*
- ***Passport Details****: Having valid Indian Passport*
- ***Languages Proficiency:*** *English, Hindi, Bengali, Assamese.*
- ***Hobbies:*** *Reading novels, internet surfing, explore new places,singing.*
- ***Marital status:*** *Single*
- ***Nationality:*** *Indian*

Teaching Experience:- ***Worked as an Assistant Professor at Department of Applied Siences, The NorthCap University,(formerly ITM University), Gurugram, since 09 January, 2018 to 06 March, 2019.***

Research Experience:- ***Worked as a Post-Doctoral Researcher at The University of Electronic Science and Technology of China, Chengdu, from April 2019 to September 2019.***

Research work

- ***July 2013-November 2017:*** *Ph.D scholar at IIT Roorkee,*
  Present: Ph.D Awarded on April 2018*.*
  Department of Mathematics, IIT Roorkee.
- ***Thesis Title:*** *On efficiency and duality for some vector optimization problems*
- ***Supervisor:*** *Dr. S. K. Gupta*

Research Interests

- Mathematical Programming Problems, Non-smooth Optimization, Fractional Programming problems, Interval-Valued Optimization, Generalized Convexity, I-fuzzy/Fuzzy Optimization, Variational Control Problems etc.

Educational Qualification

- **PhD (Mathematics)** pursuing (**Thesis Submitted**) from **IIT Roorkee**.
- **Pre-PhD (Course Work)** from **IIT Roorkee** with CGPA: **9.14/10**.
- **M.Sc. (Mathematics)** from **Gauhati University**, Guwahati with **CGPA 9.8/10** in the year 2012.
- **B.Sc**. (**Mathematics**) from **Kokrajhar Govt. College** under **Gauhati University** with **76.6%** in the year 2010.
- **10+2** (NON-MEDICAL) from **Kokrajhar Govt. College**, Kokrajhar under with **71.00%** in the year 2007 under Assam Higher Secondary Education Council **(AHEC board)**.
- **10th** from **B. P. C. M Babyland Eng. Med. High School, Kokrajhar** with **81.00%** in the year 2005 under Secondary Education Board of Assam **(SEBA)**.

Awards/Scholarships

- **GATE-2013** cleared with **ALL INDIA RANK 91**.
- Stood second position in M.SC in **GAUHATI UNIVERSITY, GAUHATI** in the year 2012**.**
- Stood first position in graduation (B.Sc) under **GAUHATI UNIVERSITY** in the year 2010 and received **GOLD MEDAL** and **CERTIFICATE OF APPRECIATION**.

Computer Skills

- Mapple, Mathematica, Scilab, LaTeX, MS-Office.
- Certified a Computer Program on "Diploma in Computer Application and Maintenance" with grade "A" from *Infotech System, Kokrajhar (Assam), India,* during January 2010 to June 2010.

Workshops/Conferences

- Attended and presented a paper entitled "Necessary and sufficient optimality conditions for fractional interval valued optimization problems" in The International Conference on "The Recent Trends on Operations Research and Statistics" held at *Indian Institute of Technology Roorkee*, during 28-30 December, 2017.
- Attended an workshop on "Nonlinear Analysis and its Application to Optimization Techniques" held at *Indian Institute of Technology Dhanbad, Dhanbad* during 18th August- 22nd August, 2017.
- Presented a paper in "XII International Symposium on Generalized Convexity and Monotonicity" held in Hajdúszoboszló, Hungary, during 27th August- 2nd September.
- Attended an workshop on "Applied Stochastic Models and Optimization (ASMO-17)" held at *Indian Institute of Technology Roorkee, Roorkee* during 26-27 May, 2017.
- Attended an Workshop on "AIS Optimization 2016" organized by National Center for Mathematics held at *Indian Institute of Technology Bombay, Bombay* during May 9-21, 2016.
- During February 23-25, 2016 presented a paper in "5th International Conference on Operations research and Enterprise Systems", held in Rome, Italy.
- Attended an "Advance Level Workshop on Variational Analysis and Optimization(VAO) 2015" organized by NPDE held at *Indian Institute of Technology Gandhinagar, Gujarat* during March 2-8, 2015.
- During December 1–3, 2014 attended an "International Conference on Operational Research (Theme: OR BIG DATA & ANALYTICS)" held at *Shree Venkateswara University, Tirupati, Andhra Pradesh* and presented a paper entitled "Duality for a symmetric nondifferentiable multiobjective programming problems under G_f - invexity assumption".
- During my M.Sc attended a "Winter School and Conference on Algebra and Number Theory" organized by *NBHM, DST & UGC-SAP (DRS-I)*, held from December 23-29, 2011 at *Tezpur University, Tezpur, Assam.*
- Attended number of seminars in Mathematics which were held in the Institute campus.

List of Publications in International Journals

- **Indira P. Debnath**, S.K. Gupta and Sumit Kumar, Symmetric duality for a higher-order nondifferentiable multiobjective programming. **Journal of Inequalities and Applications (SCI)**, 2015, 2015:3.
- **Indira P. Debnath**, S.K. Gupta and I. Ahmad, A note on Strong Duality theorem for a multiobjective higher order nondifferentiable symmetric dual programs. **Opsearch**, 2016, 53(1), 151-156.
- **Indira P. Debnath** and S.K. Gupta, Duality for the class of a multiobjective problem with support functions under under K-G_f -invexity assumptions. **Bulletin of the Iranian Mathematical Society (SCI) (Accepted for Publication) (2017)**.
- **Indira P. Debnath** and S.K. Gupta, Efficiency and duality for a vector of quotients of curvilinear functionals on the first order jet bundle. **Optimal Control Applications and Methods, Wiley** DOI: 10.1002/oca.2327 **(SCI) (2017)**.
- S.K. Gupta, Ramu Dubey and **Indira P. Debnath**, Second-order multiobjective programming problems and symmetric duality relations with G_f -bonvexity. **Opsearch**. DOI 10.1007/s12597-016-0280-7 **(2016).**
- **Indira P. Debnath**,S.K. Gupta, and D. Dangar, Remarks on duality for second order minimax fractional programming with B-(p,r)-invex functions. **Opsearch**. DOI 10.1007/s12597-017-0321-x **(2017)**.
- **Indira P. Debnath** and S.K. Gupta, Higher-order duality relations for multiobjective fractional problems involving support functions. **Bulletin of the Malaysian Mathematical Sciences Society (SCI), 2017,** 1-25.
- **Indira P. Debnath** and S.K. Gupta, Exponential membership function and duality gaps for I-fuzzy linear programming problems. **Iranian Journal of Fuzzy Systems,** 16(2), 147-163 **(2019)**

Publications In Conference Proceedings

- **Indira P. Debnath** and **S. K. Gupta (2018),** Necessary and Sufficient Optimality conditions for Fractional Interval-valued Optimization problems**, Decision Science in Action, pp 155-173, Springer.**
- **Indira P. Debnath** and S.K. Gupta, On Duality with Support Functions for a Multiobjective Fractional Programming Problem: in Proceedings of **5th International Conference on Operations Research and Enterprise Systems (ICORES 2016)**, **Rome**, **Italy**, 23-25 February, 115-121. SCITEPRESS – Science and Technology Publications, Lda.

Accepted Manuscript

- **Indira P. Debnath** and S.K. Gupta, The KKT conditions for multiple objective programming with nonlinear fractional interval valued objective functions. **Rairo Operations Research.**

Other Professional Activities

- Permanent member of The Working group on Generalized Convexity.
- Co-ordinatorship in organizing Faculty Development Program in The Northcap University in June 2018.

Present Courses Taught:

- **At UG level:** Engineering Mathematics I & II, Engineering Mathematics III, Operations Research, Linear Programming and its Applications
- **AT PG level:** Ordinary Differential Equations, Mathematical Programming.

Project

- Worked as a **Teaching Assistant** in 30 hrs online certification course "**Mathematical Methods and its Applications (NPTEL)**" **for the course period Jan 2017-April 2017**.
- Also in June 2012 completed my post graduation dessertation work under the supervision of Prof. Bhaben Chandra Kalita,Gauhati University, Guwahati. My topic was '**ENERGY INTEGRAL FOR STUDYING SOLITARY WAVES IN MAGNETIZED PLASMA**' from FLUID DYNAMICS.

M.Sc/B.Sc Dissertation Supervised

- **M.Sc:**
  Completed: Two
- **B.Sc:**
  Completed: Two
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Extra Curricular Activities

- Interested in outdoor games.
- Participated in different programmes in 'VARSITY WEEK', a cultural event of Gauhati University.
- Performed singing and dancing on various cultural events held in the conference and hostel programs in the institute and got Certificate of Appreciation.

Strengths

- Have full faith in God, is optimistic and is honest.
- I have also worked independently and in team work efficiently, proving my ability.
- Where there is a will, there is a way. I always have the will power to take higher responsibilities.
- Committed and disciplined.

Declaration

- "I hereby declare that all the information provided by me in this resume is factual and correct to the best of my knowledge and belief."

Date: October, 2019
Surat: Indira P. Debnath