# DEPARTMENT OF _____
## DYAL SINGH COLLEGE, UNIVERSITY OF DELHI
## FACULTY DETAIL

| Title | Dr | First Name | Monika | Last Name | Choudhary | Photograph |
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| Designation | **Assistant Professor** |
| Address | **Dyal Singh College, Lodhi Road, New Delhi** |
| Phone No   Office | |
| Residence | |
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### Educational Qualifications

| Degree | Institution | Year |
|--------|-------------|------|
| B.Sc. | **Jai Narain Vyas University, Jodhpur** | **2013** |
| M.Sc. | **Jai Narain Vyas University, Jodhpur** | **2015** |
| PhD | **Delhi Technological University, Delhi** | **2024** |
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### Career Profile

Assistant professor in the Department of Mathematics, Dyal Singh College, University of Delhi.

### Administrative Assignments  (From 1st July 2019 onwards)

NA

### Areas of Interest / Specialization

Differential Equations, Numerical Analysis, Partial differential equations.

### Subjects Taught

- Ordinary Differential Equations
- Partial Differential Equations
- Numerical Analysis
- Probability and Statistics
- Discrete Mathematics
- Calculus

### Research Guidance

*NA*

### Publications Profile

- Aditya Kaushik, Manju Sharma, Aastha Gupta and Monika Choudhary, Iterative analytic approximation to one-dimensional nonlinear reaction-diffusion equations, Mathematical Methods in the Applied Sciences (SCIE), IF-3.007(2020).

- Aditya Kaushik and Monika Choudhary, A higher-order uniformly convergent defect correction method for singularly perturbed convection-diffusion problems on an adaptive mesh, Alexandria Engineering Journal (SCIE), IF-6.626 (2022).
- Monika Choudhary and Aditya Kaushik, A uniformly convergent defect correction method for parabolic singular perturbation problems with a large delay, Journal of Applied Mathematics and Computing (SCIE), IF-2.196 (2022).
- Aditya Kaushik and Monika Choudhary, A higher-order defect correction method over an adaptive Bakhvalov-Shishkin mesh for advection-diffusion equations, Iranian Journal of Science (SCIE), IF 1.70 (2023).
- Monika Choudhary, Aditya Kaushik and Manju Sharma, A uniformly convergent defect correction method for parabolic singular perturbation problems with discontinuous convection coefficient and source term, International Journal of Computational Methods, (SCIE), IF 1.70 (2023).

## Conference Organization/ Presentations (From 1st July 2019 onwards)

- Attended the "International Conference on Recent Advances in Pure and Applied Mathematics" held at Delhi Technological University, Delhi from 23-25 October 2018.
- Attended "4th International Conference on Recent Developments in Theory, Computation & Application of Differential Equation to Celebrate the 70th Birthday of Prof MK Kadalbajoo" held at South Asian University, New Delhi from 21-23 January 2019.
- Presented a research article entitled "A defect correction method for the singularly perturbed convection-diffusion problem on Shishkin mesh" at the 24th International Conference of International Academy of Physical Sciences (CONIAPS-XXIV) on "Innovations in Physical Sciences" held at CCS University Meerut during 09-11 August 2019.
- Participated as a Technical Assistant in "One-day M.Sc. curriculum Workshop-2019" held at the Department of Applied Mathematics, DTU, Delhi on 14 November 2019.
- Attended TEQIP III sponsored one-week short-term training program on "Recent Trends in Security and Cryptography" organized by the Department of Applied Mathematics, DTU, Delhi from 18-22 November 2019.
- Attended TEQIP III sponsored one week short-term training program on "Graph Theory and Its Applications" organized by the Department of Applied Mathematics, DTU, Delhi from 25-29 November 2019.
- Presented a research article entitled "The Parameter Uniform Defect Correction Method on a Novel Shishkin-type Mesh for Linear Singularly Perturbed convection-diffusion Problem" in "International Conference on Integrated Interdisciplinary Innovations in Engineering (ICIIIE-2020)" held at Panjab University, Chandigarh during 28-30 August 2020.
- Participated in one day National Seminar on Emerging Trends in Applied Mathematics held on February 27, 2021, at Panjab University, Chandigarh.
- Participated in the 27th International Conference of International Academy of Physical Sciences (CONIAPS XXVII) on "Recent Advances In Solid Mechanics and Seismology" held at Kurukshetra University, Kurukshetra from 26-28 October 2021.
- Participated in a 2-day workshop on "Maple 2022 & its Applications" organized by Binary Semantics Ltd at the Department of Applied Mathematics, DTU, Delhi from 26-27 May 2022.

## Research Projects (Major Grants/Research Collaboration) (From 1st July 2019 onwards)

| Awards and Distinctions (From 1st July 2019 onwards) |
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| <ul><li>Recipient of Junior Research Fellowship of CSIR during Ph.D.</li><li>Recipient of Research Award in the Research Excellence Award ceremony at Delhi Technological University in 2021.</li><li>Recipient of Research Award in the Research and Innovations Excellence Award ceremony at Delhi Technological University in 2024.</li></ul> |
| Association With Professional Bodies |
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| Other Activities like MOOCs/ Patents etc.  (From 1st July 2019 onwards) |
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Signature of Faculty Member