List of Ph.D. Scholars of the Department of Mathematics

|    | Name of the<br>Scholar      | Name of the<br>Supervisor/s           | Registration Number  | Year of<br>Award | Title of the thesis   |
|----|-----------------------------|---------------------------------------|----------------------|------------------|---|
| 1  |                             | Dr. V.K. Kukreja<br>Dr. S.S. Dhaliwal | PTU/Ph.D./07.04.03   | 2007             | Solutions of partial differential equations involving diffusion dispersion phenomenon using weighted residual methods                               |
| 2  | Dr. Amritbir Singh          | Dr. R.K. Mishra<br>Dr. S.S. Dhaliwal  | SLIET/Ph.D./07.07.06 | 2011             | Investigation on certain cosmological models of general theory of relativity for existence of dark matter in the universe due to variable constants |
|    | Dr. Arunesh Kumar<br>Pandey | Dr. R.K. Mishra<br>Dr. T.N. Pandey    | SLIET/Ph.D./14/07    | 2014             | Certain investigations on hidden connections between Finsler geometry & theory of relativity along with study of various cosmological consequences  |
|    |                             | Dr. S.S. Dhaliwal<br>Dr. Sushma Gupta | SLIET/Ph.D./15/07    | 2011             | Some differential subordinations and their applications to the study of univalent and multivalent functions   |
| 5  | Dr. Sanjeev Kumar           | Dr. S.S. Dhaliwal                     | SLIET/Ph.D./34/08    | 2012             | Development and analysis of new iterative methods for numerical solution of non-linear equations  |
| 6  | Dr. Rajni Sharma            | Dr. J.R. Sharma<br>Dr. R.K. Guha      | SLIET/Ph.D./38/08    | 2012             | Iterative methods for the solution of nonlinear equations   |
| 7  | Dr. Sabina                  | Dr. Vinod Mishra                      | SLIET/Ph.D./47/08    | 2012             | Wavelet-Galerkin technique for solving certain numerical differential equations and inverse ill-posed problems                                      |
| 8  | Dr. Puneet Gupta            | Dr. J.R. Sharma<br>Dr. R.K. Guha      | SLIET/Ph.D./62/08    | 2014             | Numerical solutions of nonlinear equations: Some improved iterative methods   |
| 9  | Dr. Bharti Gupta            | Dr. V.K. Kukreja                      | SLIET/Ph.D./80/08    | 2015             | Applications of orthogonal Spline collocation method for the solution of Diffusion problems   |
|    | Dr. Ajay Kumar<br>Mittal    | Dr. V.K. Kukreja                      | SLIET/Ph.D./94/09    | 2015             | Solution of two point boundary value problems by orthogonal collocation on finite elements using Hermite basis                                      |
| 11 | Dr. Rupinderjit<br>Kaur     | Dr. Mandeep<br>Singh                  | SLIET/Ph.D./115/09   | 2014             | Inequalities involving matrix functions   |

| 12 | Dr. Harpreet Kaur          | Dr. Vinod Mishra<br>Dr. R.C. Mittal, IIT | SLIET/Ph.D./116/09 | 2015 | Haar wavelet technique for solving certain differential, integral and integro-differential equations                |
|----|----------------------------|--|--------------------|------|---|
| 13 | Dr. Sarika Verma           | Dr. S.S. Dhaliwal<br>Dr. Sushma Gupta    | PMA-1002           | 2015 | Study of some integral operators involving analytic functions   |
| 14 | Dr. Chanchal               | Dr. R.K. Mishra                          | PMA-1003           | 2015 | Certain aspects of the expansion of Bianchi I & II universes with   |
| 15 | Dr. Raj Kumar              | Dr. S.S. Dhaliwal<br>Dr. Sushma Gupta    | PMA-1004           | 2015 | Convolution properties of some univalent harmonic functions   |
| 16 | Dr. Gurbinder Kaur         | Dr. R.K. Guha<br>Dr. J. Dhar, IIITM      | PMA-1005           | 2017 | Hybrid approach of conventional time series and ANN soft<br>computing techniques for forecasting NSE and BSE stocks |
| 17 | Dr. Dinesh Kumar           | Dr. S.S. Dhaliwal<br>Dr. J.N. Sharma,    | PMA-1006           | 2015 | Analysis of wave propagation through visco-thermo-elastic materials   |
| 18 | Dr. Ishfaq Ahmad<br>Ganaie | Dr. V.K. Kukreja                         | PMA-1007           | 2015 | Solution of differential equations using Hermite collocation method   |
| 19 | Dr. Himani Arora           | Dr. J.R. Sharma                          | PMA-1101           | 2017 | Some improved classes of Iterative methods for solving nonlinear equations  |
| 20 | Dr. Rajinder Pal           | Dr. Mandeep<br>Singh                     | PMA-1102           | 2019 | On matrix inequalities  |
| 21 | Dr. Avtar Chand            | Dr. R.K. Mishra<br>Dr. J.R. Sharma       | PMA-1301           | 2019 | Certain investigation on dark energy cosmological models in alternative theories of gravitation                     |
| 22 | Dr. Dimple Rani            | Dr. Vinod Mishra                         | PMA-1305           | 2020 | Laplace transform based numerical solutions of certain differential and integral equations                          |
| 23 | Dr. Anchal<br>Aggarwal     | Dr. Mandeep<br>Singh<br>Dr. J.S.         | PMA-1501           | 2021 | Operators and associated norm inequalities  |
| 24 | Dr. Deepak Kumar           | Dr. J.R. Sharma                          | PMA-1502           | 2020 | Development and analysis of some efficient iterative methods for solving nonlinear equations                        |
| 25 | Dr. Sunil Kumar            | Dr. J.R. Sharma                          | PMA-1601           | 2021 | Development of some improved classes of numerical methods for solving nonlinear equations                           |
| 26 | Dr. Deepali                | Dr. S.S. Dhaliwal<br>Dr. Sushma Gupta    | PMA-1303           | 2021 | Some aspect of univalent harmonic mappings  |

| 27 | Dr. Ravneet Kaur  | Dr. V.K. Kukreja                      | PMA-1304 | 2021 | Solution of some partial differential equations using finite difference method   |
|----|-------------------|---------------------------------------|----------|------|--|
| 28 | Dr. Yogesh Kapil  | Dr. Mandeep<br>Singh                  | PMA-1401 | 2022 | Operator inequalities  |
| 29 | Dr. Chinu Singla  | Dr. S.S. Dhaliwal<br>Dr. Sushma Gupta | PMA-1503 | 2022 | Analytic and geometric properties of some univalent harmonic functions   |
| 30 | Dr. Shallu        | Dr. V.K. Kukreja                      | PMA-1804 | 2023 | An approved B-spline collocation method for non-linear partial differential equations                                      |
| 31 | Dr. Heena Dua     | Dr. R.K. Mishra                       | PMA-1504 | 2023 | Certain investigations on cosmological models with billinear deceleration parameter in alternative theories of gravitation |
| 32 | Dr. Archna Kumari | Dr. V.K. Kukreja                      | PMA-1802 | 2023 | Solution of singularly perturbed differential equations using Hermite collocationmethod                                    |
| 33 | Dr. Narbada Rani  | Dr. Vinod Mishra                      | PMA-1801 | 2023 | Magic squares and cubes: constructions, properties and applications  |
| 34 | Dr. Harmandeep    | Dr. J.R.Sharma                        | PMA-2011 | 2024 | On some efficient numerical methods for non –linear equations  |
| 35 | Dr. Sonu          | Dr. R.K. Guha                         | PMA-1602 | 2024 | New products adoption dynamics in competitive environment: innovationdiffusion models                                      |

## List of Ph.D. Students of Department of Mathematics (Pursuing)

| S.No. | Name of         | Name of the                           | Registration | Title of the Thesis  |
|-------|-----------------|---------------------------------------|--------------|--|
|       | theScholar      | Supervisor/s                          | Number       |  |
| 1     | Ms. Roji Bala   | Dr. Vinod Mishra                      | PMA-1805     | Fibonacci and Narayana like sequences theory and applications  |
| 2     | Mr. Mandeep     | Dr. Mandeep Singh                     | PMA-2012     | Analysis on inertia and determinants of some special matrices  |
| 3     | Ms. Anju Rani   | Dr. Mandeep Singh                     | PMA-2025     | Operator inequalities involving singular values  |
| 4     | Ms. Manju Yadav | Dr. S.S. Dhaliwal<br>Dr. Sushma Gupta | PMA-2118     | Mapping properties of some univalent functions   |
| 5     | Ms. Anita Devi  | Dr. V.K. Kukreja                      |              | Numerical Solutions of fractional partial differential equations using<br>improvised cubic B-spline collocation method |

| 6  | Ms. Mannat Mand          | Dr. V.K. Kukreja  | PMA-2138 | Analysis of distribution and normalization using statistical techniques in data            |
|----|--------------------------|---|----------|--|
|    |                          | Dr. Birmohan Singh  |          | science  |
| 7  | Mr. Rahul Sharma         | Dr. R.K. Mishra   | PMA-2213 | Exploring potential dark energy sources in some alternative theories of gravitation        |
| 8  | Mr. Arbaz Khan           | Dr. S. Kumar  | PMA-2212 | Solution of some partial differential equations using finite element method                |
| 9  | Ms. Navya Jain           | Dr. R.K. Mishra   | PMA-2224 | Advanced dynamics in cosmological models with perturbative study beyond general relativity |
| 10 | Ms. Drishti Rajput       | Dr. V. Mishra   | PMA-2225 | Study of haar, Hermite and Meixner wavelets with applications in differential equations    |
| 11 | Mr. Prem Sagar           | Dr. J.R. Sharma   | PMA-2310 | Yet to be decided  |
| 12 | Ms. Bhumika<br>Choudhary | Dr. Yogesh Kapil<br>Dr. Mandeep Singh                       | PMA-2340 | Yet to be decided  |
| 13 | Ms. Shivani<br>Chandalia | Dr. Vinod Mishra  | PMA-2341 | Yet to be decided  |
| 14 |                          | Dr. Yogesh Kapil<br>Dr. Mandeep Singh                       | PMA-2355 | Yet to be decided  |
| 15 | Ms. Annu Devi            | Dr. V.K. Kukreja  | PMA-2356 | Yet to be decided  |
| 16 | Ms. Nirmala Tandi        | Dr. Vinod Mishra  | PMA-2357 | Yet to be decided  |
| 17 | Ms. Arti Devi            | Dr. V.K. Kukreja<br>Dr. Vinay Kanwar<br>(Panjab University) | PMA-2421 | Yet to be decided  |
| 18 | Mr. Ashish Kumar         | Dr. J.R. Sharma   | PMA-2427 | Yet to be decided  |
| 19 | Ms. Priya Awasthi        | Dr. R.K. Mishra   | PMA-2426 | Yet to be decided  |
| 20 | Mr. Brijesh Singh        | Dr. Vinod Mishra  | PMA-2435 | Yet to be decided  |
| 21 | Mr. Subarna<br>Khanra    | Dr. V. K Kukreja  | PMA-2448 | Yet to be decided  |
| 22 |                          | Dr. Yogesh Kapil<br>Dr. Mandeep Singh                       | PMA-2457 | Yet to be decided  |
| 23 | Ms. Samta Jain           | Dr. Sudhir Kumar  | PMA-2454 | Yet to be decided  |
| 24 | Mr. Neeraj Kumar         | Dr. R.K. Mishra   | PMA-2458 | Yet to be decided  |
| 25 |                          | Dr. V. K Kukreja<br>Dr. J.R. Sharma                         | PMA-2459 | Yet to be decided  |