



# Research Group 4

| <b>Group Name</b> | Functional Analysis |  |
|-------------------|---------------------|--|
| Academic Year     | 2021                |  |

| Basic Information        |  |  |
|--------------------------|--|--|
| Department Mathematics   |  |  |
| Location Sohag Univesity |  |  |
|                          |  |  |
|                          |  |  |

| Group Members |  |   |   |  |  |  |
|---------------|--|---|---|--|--|--|
| No. of Prof.  | No. of Prof. No. of Ass. Prof. No. of Lect. No. of Ass. Lect. & Demonst. |   |   |  |  |  |
| -             | -  | 2 | 1 |  |  |  |





|   | ,                    |               |                   |                   |                     | Staff                  | mem              | bers  |   |
|---|----------------------|---------------|-------------------|-------------------|---------------------|------------------------|------------------|---|---|
| # | Name                 |               | Scier<br>deg      |                   | e-                  | mail                   | S                | pecializations  | C.V   |
| 1 | Mohammed<br>Elmursi  |               | lectu             | ırer              |                     | @acience.so<br>edu.eg  | Fı               | unctional Analysis  | https://scholar.google.com/citations?hl=en&user<br>=tqo1VLQAAAAJ&view_op=list_works&alert_pre<br>view_top_rm=2&sortby=pubdate |
| 2 | Hasanen A.<br>Hammad |               | lectu             | ırer              | edu.eg              | ience.sohag.           |                  | unctional Analysis  | https://www.scopus.com/authid/detail.uri?origi<br>n=resultslist&authorId=57191572516&zone=                                    |
|   |                      | ı             |                   | _                 |                     | Ass. Lecturers         | <u>s &amp; D</u> | emonstrators  |   |
| # | Name                 | _             | ientific<br>egree | е                 | -mail               | nail Specializatio     |                  |   |   |
| 3 | Ahmed<br>Nafea       | Teac<br>Assis | •                 | a.nafea<br>ohag.e | @science.s<br>du.eg | Functional<br>Analysis |                  | https://www.researchgate.net/profile/Ahmed-Nafea-4/research |   |
|   |                      |               |                   |                   |                     |                        |                  |   |   |





|   | Theses produced by the Lab |   |               |  |  |  |
|---|----------------------------|---|---------------|--|--|--|
|   |                            | M. Sc Thesis  |               |  |  |  |
| # | Name                       | Title   | Approval date |  |  |  |
| 1 |                            |   |               |  |  |  |
| 2 |                            |   |               |  |  |  |
|   | Ph.D. Thesis               |   |               |  |  |  |
| # |                            |   |               |  |  |  |
| 1 | Hasanen A.<br>Hammad       | A Study of Random Common Fixed Point Theorems for Random Operators in Various Spaces and Its Applications | 3-2018        |  |  |  |
| 2 |                            |   |               |  |  |  |





|    | Articles produced by the Lab   |   |  |  |  |  |
|----|--|---|--|--|--|--|
| #  | Title  | Journal information   |  |  |  |  |
| 1  | alpha-isometries on metric and normed linear spaces  | International conference on Mathematics and Statistics (ICOMAS 2018)        |  |  |  |  |
| 2  | Some results related to Bessel's inequality in inner product spaces  | Journal of Mathematical Inequalities 13 (1), 205-<br>214                    |  |  |  |  |
| 3  | Analytical solution for a periodic boundary random-value problem via stochastic fixed points with PPF dependence technique                     | Statistics, Optimization and Information Computing, 2019, 7(4), pp. 653–668 |  |  |  |  |
| 4  | A modified shrinking projection methods for<br>numerical reckoning fixed points of G-<br>nonexpansive mappings in hilbert spaces with<br>graph | Miskolc Mathematical Notes, 2019, 20(2), pp. 941–956                        |  |  |  |  |
| 5  | Common fixed point results for weakly compatible mappings under implicit relations in complex valued g-metric spaces                           | Information Sciences Letters, 2019, 8(3), pp. 111–119                       |  |  |  |  |
| 6  | PPF-dependent fixed point results for new multi-<br>valued generalized F-contraction in the<br>Razumikhin class with an application            | Mathematics, 2019, 7(1), 52   |  |  |  |  |
| 7  | Generalized contractive mappings and related results in b-metric like spaces with an application   | Symmetry, 2019, 11(5), 667  |  |  |  |  |
| 8  | A coupled fixed point technique for solving coupled systems of functional and nonlinear integral equations                                     | Mathematics, 2019, 7(7), 634  |  |  |  |  |
| 9  | Analytical solution of Urysohn integral equations<br>by fixed point technique in complex valued metric<br>spaces                               | Mathematics, 2019, 7(9), 852  |  |  |  |  |
| 10 | A solution of fredholm integral equation by using<br>the cyclicnqs-rational contractive mappings<br>technique in b-metric-like spaces          | Symmetry, 2019, 11(9), 1184   |  |  |  |  |
| 11 | Fixed-point results for a generalized almost (s, q)-<br>Jaggi F-contraction-type on b-metric-like spaces                                       | Mathematics, 2020, 8(1), 63   |  |  |  |  |
| 12 | A technique of tripled coincidence points for solving a system of nonlinear integral equations in  | Journal of Inequalities and Applications, 2020, 2020(1), 211                |  |  |  |  |





|    | POCML spaces   |   |
|----|--|---|
| 13 | The laminar boundary layer over a rotating paraboloid  | Information Sciences Letters, 2020, 9(3), pp. 199–204                       |
| 14 | Shrinking Projection Methods for Accelerating<br>Relaxed Inertial Tseng-Type Algorithm with<br>Applications                            | Mathematical Problems in Engineering, 2020, 2020, 7487383                   |
| 15 | Solving a stochastic nonlinear integral equation via<br>random fixed point technique in ordinary metric<br>spaces                      | Mathematics in Engineering, Science and Aerospace, 2020, 11(4), pp. 889–901 |
| 16 | Weak and strong convergence results for the modified noor iteration of three quasi-nonexpansive multivalued mappings in hilbert spaces | Filomat, 2020, 34(8), pp. 2495–2510   |
| 17 | Solution of Nonlinear Integral Equation via Fixed<br>Point of Cyclic αLψ -Rational Contraction<br>Mappings in Metric-Like Spaces       | Bulletin of the Brazilian Mathematical Society, 2020, 51(1), pp. 81–105     |
| 18 | Modified CQ-Algorithms for G -Nonexpansive<br>Mappings in Hilbert Spaces Involving Graphs  | New Mathematics and Natural Computation, 2020, 16(1), pp. 89–103            |
| 19 | Advanced algorithms and common solutions to variational inequalities   | Symmetry, 2020, 12(7), 1198   |
| 20 | On (φ, ψ)-metric spaces with applications  | Symmetry, 2020, 12(9), 1459   |
| 21 | Generalized dynamic process for an extended<br>multi-valued F-contraction in metric-like spaces<br>with applications                   | Alexandria Engineering Journal, 2020, 59(5), pp. 3817–3825                  |
| 22 | A tripled fixed point technique for solving a<br>tripled-system of integral equations and Markov<br>process in CCbMS                   | Advances in Difference Equations, 2020, 2020(1), 567                        |
| 23 | The technique of quadruple fixed points for solving functional integral equations under a measure of noncompactness                    | Mathematics, 2020, 8(12), pp. 1–21, 2130                                    |
| 24 | Tripled fixed point techniques for solving system of tripled-fractional differential equations   | AIMS Mathematics, 2021, 6(3), pp. 2330–2343                                 |
| 25 | Exciting Fixed Point Results on a Novel Space with Supportive Applications   | Journal of Function Spaces, 2021, 2021, 6613774                             |
| 26 | Analytical Solution for Differential and Nonlinear<br>Integral Equations via Fωe -Suzuki Contractions in                               | Journal of Function Spaces, 2021, 2021, 6128586                             |





|    | Modified ωe -Metric-Like Spaces-   |  |
|----|--|--|
| 27 | Solutions of Fractional Differential Type Equations<br>by Fixed Point Techniques for Multivalued<br>Contractions                 | Complexity, 2021, 2021, 5730853                        |
| 28 | Recent Fixed-Point Results for $\theta$ - Contraction<br>Mappings in Rectangular M- Metric Spaces with<br>Supportive Application | Journal of Mathematics, 2021, 2021, 5564248            |
| 29 | Solving a Split Feasibility Problem by the Strong<br>Convergence of Two Projection Algorithms in<br>Hilbert Spaces               | Journal of Function Spaces, 2021, 2021, 5562694        |
| 30 | Accelerated modified inertial mann and viscosity algorithms to find a fixed point of α-inverse strongly monotone operators       | AIMS Mathematics, 2021, 6(8), pp. 9000–9019            |
| 31 | A Fixed Point Technique for Set-Valued<br>Contractions with Supportive Applications  | Advances in Mathematical Physics, 2021, 2021, 6880478  |
| 32 | Solving singular coupled fractional differential equations with integral boundary constraints by coupled fixed point methodology | AIMS Mathematics, 2021, 6(12), pp. 13370–13391         |
| 33 | A Fixed Point Technique for Solving an Integro-<br>Differential Equation Using Mixed-Monotone<br>Mappings                        | Journal of Function Spaces, 2021, 2021, 9925073        |
| 34 | Fixed point results for multivalued mappings with applications   | Journal of Function Spaces, 2021, 2021, 9921728        |
| 35 | Wardowski's Contraction and Fixed Point<br>Technique for Solving Systems of Functional and<br>Integral Equations                 | Journal of Function Spaces, 2021, 2021, 7017046        |
| 36 | Approximation of the fixed point for unified three-<br>step iterative algorithm with convergence analysis<br>in busemann spaces  | Axioms, 2021, 10(1), pp. 1–11, 26                      |
| 37 | Tikhonov regularization terms for accelerating inertial mann-like algorithm with applications                                    | Symmetry, 2021, 13(4), 554                             |
| 38 | A weak tripled contraction for solving a fuzzy global optimization problem in fuzzy metric spaces                                | Symmetry, 2021, 13(4), 565                             |
| 39 | A novel four-step iterative scheme for approximating the fixed point with a supportive application                               | Information Sciences Letters, 2021, 10(2), pp. 333–339 |





|    | Applications to boundary value problems and         |   |  |
|----|---|---|--|
| 40 | homotopy theory via tripled fixed point techniques  | Mathematics, 2021, 9(16), 2012                      |  |
| '  | in partially metric spaces                          | , , , , , , ,                                       |  |
|    | Exciting fixed point results under a new control    |   |  |
| 41 | function with supportive application in fuzzy cone  | Mathematics, 2021, 9(18), 2267                      |  |
|    | metric spaces                                       |   |  |
|    | Modified Hybrid Projection Methods with SP          | Pullatin of the Ironian Mathematical Society 2001   |  |
| 42 | Iterations for Quasi-Nonexpansive Multivalued       | Bulletin of the Iranian Mathematical Society, 2021, |  |
|    | Mappings in Hilbert Spaces                          | 47(5), pp. 1399–1422                                |  |
|    | Effect of shrinking projection and CQ-methods on    | Rendiconti del Circolo Matematico di                |  |
| 43 | two inertial forward–backward algorithms for        | Palermo, 2021, 70(3), pp. 1669–1683                 |  |
|    | solving variational inclusion problems              | 1 alc11110, 2021, /0(3), pp. 1009–1003              |  |
|    | Contributions of the fixed point technique to solve |   |  |
| 44 | the 2D Volterra integral equations, Riemann-        | Advances in Difference Equations, 2021, 2021(1),    |  |
| 44 | Liouville fractional integrals, and Atangana-       | 97  |  |
|    | Baleanu integral operators                          |   |  |
|    | Existence theorem for a unique solution to a        | Advances in Difference Equations, 2021, 2021(1),    |  |
| 45 | coupled system of impulsive fractional differential | 242   |  |
|    | equations in complex-valued fuzzy metric spaces     |   |  |
|    | New coincidence point results for generalized       | Advances in Difference Equations, 2021, 2021(1),    |  |
| 46 | graph-preserving multivalued mappings with          | 334   |  |
|    | applications  | 307   |  |
| 47 | Solving a fractional-order differential equation    | Fractal and Fractional, 2021, 5(4), 159             |  |
| 7/ | using rational symmetric contraction mappings       |   |  |
|    | New contributions for tripled fixed point           | Alexandria Engineering Journal, 2022, 61(4), pp.    |  |
| 48 | methodologies via a generalized variational         | 2687–2696   |  |
|    | principle with applications                         |   |  |