

## Suzan Cival Buranay (FACULTY MEMBER)

**Area:** MATHEMATICS – NUMERICAL ANALYSIS

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**Online Research Profiles**  
<https://scholar.google.com/citations?hl=en&user=a6WzSYAAAAJ>

<https://www.webofscience.com/wos/author/record/45778544>

**Research Area Keywords**

- Finite difference method
- Numerical solution of PDEs
- Iterative methods
- Stability analysis
- Error bounds
- Convergence analysis

**Recent Supervised Theses / Projects**

Ph.D. Theses:

- 1) Collocation Method for Solving problems of Generalized Fractional Bagley-Torvik Equation – Mtema James Chin (2025).
- 2) Highly Accurate Implicit Schemes Using Hexagonal Grids for the Approximation of the Derivatives of the Solution of Two Dimensional Heat Equation – Ahmed Hersi Mohamed Matan (2022).
- 3) Numerical solution of Volterra integral equations using some linear positive operators – Sara Safarzadeh Falahhesar (2022).
- 4) Hexagonal Grid Approximation of the Solution of Two Dimensional Heat Equation – Nouman Arshad (2020).
- 5) Grid Approximation of Derivatives of the Solution of Heat Conduction Equation – Lawrence Adedayo Farinola (2019).

M.Sc. Theses:

- 1) Accelerated Overrelaxation Method for the Solution of Discrete Laplace's Equation on a Rectangle – Bewar Sulaiman (2016).
- 2) On A Comparative Study of Direct Solution Methods of The Discrete Poisson Equation on a Rectangle – Damilola V. Adekanmbi (2016).
- 3) Approximate methods of inverse preconditioners for solving the linear algebraic equations – Soran Jalal Abdalla (2014).

Grants and Projects:

- 1) "Collocation Method for the Solutions of Fractional Boundary Value Problems of Generalized Bagley-Torvik Equation" (2023).
- 2) "Analitik Olmayan Sınır Koşullu Laplace Denkleminin Tekilliği Bulunan Çözümleri için Blok-Izgara (Block-Grid) Yöntemi" (2010).