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CURRICULUM VITAE

EDUCATION

Ph. D. Mathematics (Faculty of Arts and Sciences)
September 2007-March 2011

Kocaeli University, Kocaeli, Turkey

Advisor: Zahir Muradođlu

Ph. D. Thesis Title: An Inverse Coefficient Problem Defined With Monotone Potential Operator for an Elliptic Equation

M. S. Mathematics (Faculty of Arts and Sciences)
September 2004-July 2007

Kocaeli University, Kocaeli, Turkey

Advisor: Alemdar Hasanoglu

M. S. Thesis Title: Solution of an Inverse Coefficient Problem For a Monotone Operator Related to Elasto-Plastic Torque of A Bar

B. S. Mathematics (Faculty of Arts and Sciences)
August 1999-August 2004

Kocaeli University, Kocaeli, Turkey

WORK EXPERIENCE

- (03.01.2018-current) **Associate Professor** at the Department of Mathematics & Computers Science, College of Science & General studies, **Alfaisal University, Riyadh, Saudi Arabia .**
- (01.10.2014-23.07.2016) **Associate Professor** at the Department of Elementary Mathematics Education, Faculty of Education, **Zirve University, Gaziantep, Turkey.**
- (01.06.2011-31.09.2014) **Assistant Professor** at the Department of Elementary Mathematics Education, Faculty of Education, **Zirve University, Gaziantep, Turkey.**
- (31.12.2005-31.05.2011) **Research Assistant** at Department of Mathematics, **Kocaeli University, Kocaeli, Turkey**

RESEARCH INTERESTS

- Nonlinear Partial Differential Equations
- Applied Mathematics and Numerical Analysis of PDEs
- Fractional Equations and Their Analysis
- Inverse Problems
- Nonlocal Equations
- Mathematical Modeling
- Numerical Methods
- Computational Materials Science
- Mathematical Problems in Elasticity and Elastoplasticity

TEACHING EXPERIENCE

COURSES TAUGHT AT ALFAISAL UNIVERSITY (IN ENGLISH)

- Spring 2020-2021 Calculus 2, Instructor. (Approx. 180 students)
- Fall 2020-2021 Calculus 1, Instructor. (Approx. 108 students), Linear Algebra, Instructor. (Approx. 118 students)
- Summer 2019-2020 (Distance Education using Moodle): Linear Algebra, Instructor. (Approx. 35 students). Differential Equations, Instructor. (Approx. 90 students)
- Spring 2019-2020 (Distance Education using Moodle): Linear Algebra, Instructor. (Approx. 40 students). Calculus 2, Instructor. (Approx. 140 students), Business Calculus, Instructor. (Approx. 40 students).
- Fall 2019-2020: Linear Algebra, Instructor. (Approx. 110 students). Calculus 1, Instructor. (Approx. 100 students)
- Spring 2018-2019: Business Calculus, Instructor. (Approx. 50 students). Calculus 2, Instructor. (Approx. 100 students). Linear Algebra, Instructor. (Approx. 40 students).

- Fall 2018-2019: Precalculus, Instructor. (Approx. 50 students). Calculus 1, Instructor. (Approx. 120 students)
- Spring 2017-2018: Business Calculus, Instructor. (Approx. 50 students). Precalculus, Instructor. (Approx. 40 students)

COURSES TAUGHT AT ZIRVE UNIVERSITY (IN ENGLISH)

- Summer 2015-2016: Differential Equations, Instructor. (Approx. 15 students)
- Spring 2015-2016: Differential Equations, Instructor. (Approx. 250 students)
- Fall 2015-2016: Differential Equations, Instructor. (Approx. 80 students) Hist. of Math, Instructor. (Approx. 50 students)
- Spring 2014-2015: Differential Equations, Instructor. (Approx. 300 students)
- Fall 2014-2015: Linear Algebra, Instructor. (Approx. 300 students)
- Summer 2013-2014: Differential Equations, Instructor. (Approx. 50 students)
- Spring 2013-2014: Differential Equations, Instructor. (Approx. 250 students)
- Fall 2013-2014: Linear Algebra, Instructor. (Approx. 200 students)
- Summer 2012-2013: Differential Equations, Instructor. (Approx. 60 students)
- Spring 2012-2013: Differential Equations, Instructor. (Approx. 250 students)
- Fall 2012-2013: Linear Algebra, Instructor. (Approx. 200 students) Probability and Statis. (Approx. 50 students)
- Spring 2011-2012: Diferential Equations, Instructor. (Approx.60 students) Probability and Statis. (Approx. 50 students)
- Fall 2011-2012: Linear Algebra, Instructor. (Approx. 60 students) Basic Math. (Approx. 50 students)

COURSES TAUGHT AT KOCAELI UNIVERSITY

- Spring 2010-2011: Math. 2, Teaching Assistant. (Approx. 50 students) Math. 3, Teaching Assistant. (Approx. 70 students)
- Fall 2010-2011: Partial Differential Equations 1, Teaching Assistant. (Approx. 60 students) Matlab, Teaching Assistant. (Approx. 50 students)
- Spring 2009-2010: Partial Differential Equations 2, Teaching Assistant. (Approx. 60 students)
- Fall 2009-2010: Partial Differential Equations 1, Teaching Assistant. (Approx. 60 students) Differential Equations 1, Teaching Assistant. (Approx. 50 students)
- Spring 2008-2009: Partial Differential Equations 2, Teaching Assistant. (Approx. 60 students) Differential Equations 2, Teaching Assistant. (Approx. 50 students)

RESEARCH GRANTS:

1.Mathematical analysis and numerical solution of direct and inverse problems for some nonlinear elliptic and parabolic equations, February 2014-February 2016, Project number: 113F373, **TUBITAK, Principal Investigator.**

2. Solutions of Inverse Problems With Nonlocal Additional Conditions For Linear/Nonlinear Parabolic Equations and Applications to Water Remediation/Pollution and Ion Transfer Problems, October 2009-October 2010, Project number:108T332, **TUBITAK, Granted P.h.D. Student.**

PUBLICATONS:

1. An inverse source problem for pseudo-parabolic equation with Caputo derivative , Le Dinh Long, Nguyen Hoang Luc, Salih Tatar, Dumitru Baleanu, Nguyen Huu Can, *Journal of Applied Mathematics and Computing*, <https://doi.org/10.1007/s12190-021-01546-5>.
2. An inverse problem for an inhomogeneous time-fractional diffusion equation: a regularization method and error estimate, Tuan, N.H., Hoan, L.V.C. , **Salih Tatar**. *Comp. Appl. Math.* (2019) 38: 32.
3. Recovery of the solute concentration and dispersion flux in an inhomogeneous time fractional diffusion equation, Nguyen Huy Tuan, Tran Bao Ngoc, **Salih Tatar**, Le Dinh Long, *Journal of Computational and Applied Mathematics*, 342 (2018), 96-118.
4. Tikhonov regularization method for a backward problem for an inhomogeneous time-fractional diffusion equation, Nguyen Huy Tuan, Le Ding Long, **Salih Tatar**, *Applicable Analysis*, 97 (2018), 842-863.
5. Numerical solutions of direct and inverse problems for a time fractional viscoelastoplastic equation, **Salih Tatar**, Ramazan Tinaztepe, Mustafa Zeki, *ASCE journal of Engineering Mechanics*, 143 (2017), 04017035.
6. Analysis of direct and inverse problems for a fractional elastoplasticity equation, **Salih Tatar**, Süleyman Ulusoy, *Filomat*, 31 (2017), 699-708.
7. An inverse problem for a nonlinear diffusion equation with time-fractional derivative, **Salih Tatar**, Süleyman Ulusoy, *Journal of Inverse and Ill-posed Problems*, 25 (2017), 185-193.
8. Simultaneous determination of the strain hardening exponent, the shear modulus and the elastic stress limit in an inverse problem, **Salih Tatar**, Ramazan Tinaztepe, Zahir Muradoğlu, *Applied Mathematical Modeling*, 40 (2016), 6956-6968.
9. Simultaneous inversion for the exponents of the fractional time and space derivatives in the space-time fractional diffusion equation, **Salih Tatar**, Ramazan Tinaztepe, Süleyman Ulusoy, *Applicable Analysis*, 95 (2016), 1-23.
10. An inverse coefficient problem for a nonlinear reaction diffusion with a nonlinear source, **Salih Tatar**, Süleyman Ulusoy, *Electronic Journal of Differential Equations*, 245 (2015), 1-10.
11. Structural stability for the Morris-Lecar neuron model, Zhenhai Liu, **Salih Tatar**, Süleyman Ulusoy, Mustafa Zeki, *Applied Mathematics and Computation*, 270 (2015),

261-268.

12. An inverse source problem for a one dimensional space-time fractional diffusion equation, **Salih Tatar**, Süleyman Ulusoy, *Applicable Analysis*, 94 (2015), 2233-2244.

13. Determination of an unknown source term in a space-time fractional diffusion equation, **Salih Tatar**, Ramazan Tınaztepe, Süleyman Ulusoy, *Journal of Fractional Calculus and Applications (JFCA)*, 6 (2015), 94-101.

14. Numerical solution of the nonlinear evolutionary inverse problem related to elastoplastic torsional problem, **Salih Tatar**, Zahir Muradoğlu, *Applicable Analysis*, 93 (2014), 1187-1200.

15. A modification of the semi-analytic inversion method: Determination of the yield stress and a comparison with the parametrization algorithm, **Salih Tatar**, Zahir Muradoğlu, *Inverse Problems in Science and Engineering*, 22 (2014), 543-556.

16. Identification of the density dependent coefficient in an inverse reaction-diffusion problem from a single boundary data, Ramazan Tınaztepe, **Salih Tatar**, Süleyman Ulusoy, *Electronic Journal of Differential Equations*, 21 (2014), 1-14.

17. A uniqueness result in an inverse problem for a space-time fractional diffusion equation, **Salih Tatar**, Süleyman Ulusoy, *Electronic Journal of Differential Equations (EJDE)*, 258 (2013), 1-9

18. Existence and uniqueness for a nonlinear inverse reaction-diffusion problem with a nonlinear source in higher dimensions, Fahir Talay Akyıldız, **Salih Tatar**, Süleyman Ulusoy, *Mathematical Methods in the Applied Sciences*, 36 (2013), 2397-2402.

19. Monotonicity of input-output mapping related to inverse elastoplastic torsional problem, **Salih Tatar**, *Applied Mathematical Modeling*, 37 (2013), 9552-9561.

20. Quasi-solution approach for a two dimensional nonlinear inverse diffusion problem, Yiliang Liu, **Salih Tatar**, Süleyman Ulusoy, *Applied Mathematics and Computation*, 219 (2013), 10956-10960.

21. Numerical solution of the nonlinear parabolic problem related to inverse elastoplastic torsional problem, **Salih Tatar**, *Inverse Problems in Science and Engineering*, 21 (2013), 52-62.

22. Analytical solutions of a class of inverse coefficients problems, Zhenhai Liu, **Salih Tatar**, *Applied Mathematics Letters*, 25 (2012), 2391-2395.

23. An inversion method for identification of elastoplastic properties of a beam from torsional experiment, Alemdar Hasanov, **Salih Tatar**, *International Journal of Non-Linear Mechanics*, 45 (2010), 562-571.

24. Semi-analytic inversion method for determination elastoplastic properties power hardening materials from limited torsional experiment, Alemdar Hasanov, **Salih Tatar**, *Inverse Problems in Science and Engineering*, 18 (2010), 265-278.

25. Solutions of linear and nonlinear problems related to torsional rigidity of a beam , Alemdar Hasanov, **Salih Tatar**, *Computational Materials Sciences*, 45 (2009), 494-498.

SUBMITTED FOR PUBLICATON:

1. A backward problem for a nonlinear space fractional diffusion equation with time-dependent coefficient, Nguyen Huy Tuan, Ding Nguyen Duy Hai, **Salih Tatar**, **submitted to Filomat**.

WORK IN PROGRESS:

1. Invertibility of Input-Output Mappings in an Inverse Problem for a Nonlinear Fractional Diffusion Equation, **Salih Tatar**, Süleyman Ulusoy.

2. Numerical solution to the fractional Richards equation: A successive approximation scheme and method of lines, **Salih Tatar**, Mustafa Zeki

3. Determination of a nonlinear coefficient in a time-fractional diffusion equation, **Salih Tatar**, Mustafa Zeki, Suleyman Ulusoy, Masahiro Yamamoto, Ramazan Tinaztepe

TALKS&PRESENTATIONS:

1. Simultaneous inversion for the exponents of the fractional time and space derivatives in the space-time fractional diffusion equation, The seventh International conference "Inverse problems: Modeling and simulation", **Salih Tatar**, Ramazan Tinaztepe, Süleyman Ulusoy, 2014.

2. Identifying the unknown coefficient in a nonlinear elliptic problem , "The sixth International conference Inverse problems: Modeling and simulation", Alemdar Hasanov, **Salih Tatar**, 2012.

3. The secret of Pi, Pi Day, Zirve University, **Salih Tatar**, 2011.

4. On Some Olympic Math. Problems, Kocaeli University, **Salih Tatar**, 2010.

5. An inversion method for identification of elastoplastic properties of a beam from torsional experiment, "The fifth International conference Inverse problems: Modeling and simulation", Alemdar Hasanov, **Salih Tatar**, 2010.

6. A nonlocal identification problem related to determination of unknown parameters of a cylindrical bar from measured torque, **Salih Tatar**, Alemdar Hasanoglu, The fourth International conference, "Inverse problems: Modeling and simulation", 2008.

7. An inverse problem related to determination of elastoplastic properties of a beam from the torsional rigidity, **Salih Tatar**, Alemdar Hasanoglu , ISAAC Congress, 2007.

CONFERENCE ORGANIZATIONS:

1. International Conference on Global Issues of Early Childhood Education and Children's Rights, April 27-29, 2011, Gaziantep, **Session Chair**.

2. The Fifth International Conference "Inverse Problems: Modeling and Simulation, May 26-30, 2010, Antalya, **International Program Committee**.

3. The Fourth International Conference "Inverse Problems: Modeling and Simulation, May 26-30, 2008, Oludeniz-Fethiye, **International Program Committee**.

MEMBERSHIPS IN EDITORIAL BOARDS OF INTERNATIONAL JOURNALS:

1. Member of Editorial Board, Caspian Journal of Applied Sciences Research (2012-2014)

2. Member of Editorial Board, Scientific Research and Essays (2012-2013)

REFERENCES

1. Zahir Muradoğlu, Professor (PhD Advisor)

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e-mail: zahir@kocaeli.edu.tr

2. Alemdar Hasanoglu, Professor (Ms Advisor)

Address: Izmir University, Department of Math., Izmir, Turkey
e-mail: alemdar.hasanoglu@gmail.com

3. Masahiro Yamamoto, Professor

Address: Department of Mathematical Sciences, Tokyo University, Japan
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4. Zhenhai Liu, Professor

Address: College of Sciences, Guangxi University for Nationalities, China

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5. Zübeyir Çinkir, Associate Professor (On Teaching Effectiveness)

Address: Abdullah Gul University, Kayseri, Turkey

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6. Serdal Pamuk, Professor (On Teaching Effectiveness)

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REFEREE FOR:

- Inverse Problems
- Computers and Mathematics with Applications
- Journal of Mathematical Physics
- Inverse Problems in Science and Engineering
- International Journal of Physical Sciences
- Acta Mathematica Scientia
- Scientific Research and Essays
- Analysis and Mathematical Physics
- Asian Journal of Control
- Electronic Journal of Differential Equations
- Dynamics of Continuous, Discrete & Impulsive Systems, Series A: Mathematical Analysis
- American Journal of Computational and Applied Mathematics
- Caspian Journal of Applied Sciences Research
- Mathematica Slovaca
- Abstract and Applied Analysis
- Journal of Applied Mathematics
- Pure and Applied Mathematics Journal
- IMA Journal of Mathematical Control and Information
- International Journal of Solids and Structures
- Mathematics and Computers in Simulation

MEMBERSHIPS IN SCIENTIFIC ORGANIZATIONS:

1. Turkish Mathematical Society (2013-2016)

2. Mathematicians Society (2013-2016)