PROF. DR. BANU UZUN
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1. **Name**　　　　　　　 **:** Banu UZUN

2. **Birth Date**　　　　　 **:** 22.09.1971

3. **Academic Title**　　　 **:** Professor

4. **Education :**

DATES	DEGREE	UNIVERSITY	DEPARTMENT
1989-1993	BS	Istanbul Technical University	Mathematical Engineering
1993-1995	MS	Istanbul Technical University	Mathematics
1995-1999	PhD	University of Leeds	Mathematics

5. Academic Titles

YEAR	TITLE	UNIVERSITY	DEPARTMENT
2000	Asst. Prof.	Istanbul Technical University	Mathematics
2008	Assoc. Prof.	Işık University	Mathematics
2018	Prof.	Işık University	Mathematics

6. Supervised MS and PhD Theses

6.1 MS Theses

1. The Applications of Fractional Calculus to Differential Geometry, Aybüke Hacıhasanoğlu, January 2019-January 2023 (coadvisor).

6.2. PhD Theses

1. An Inverse Sourse Problem Connected Thermoacoustic Imaging In Multi-layer Planar Medium, Hazel Yücel Bayıntır, November 2013 - June 2018.
2. Solution of Inverse Source Problem in Thermoacoustic Imaging, Demet Elmas, December 2013 - July 2022.

7. Publications

7. 1. Journal Publications (SCI-Expanded)

1. J.R. Partington, B. Ünalmış, On the representation of shift-invariant operators by transfer functions, *Systems and Control Letters*, 33, 25-30, 1998.

2. B. Jacob, J.R. Partington, B. Ünalmış, On Discrete-Time Linear Systems with Almost-Periodic Kernels, *Journal of Mathematical Analysis and Applications*, 252, 549-570, 2000.

3. J.R. Partington, B. Ünalmış, On the Windowed Fourier Transform and Wavelet Transform of Almost Periodic Functions, *Applied and Computational Harmonic Analysis*, 10, 45-60, 2001.

4. M. Hasanov, B. Ünalmış Uzun and N. Çolakoğlu, A note on Riesz bases of eigenvectors for a class of nonanalytic operator functions, *Rocky Mountain Journal of Mathematics*, 36(2), 487-496, 2006.

5. N. Çolakoğlu, M. Hasanov and B. Ünalmış Uzun, Eigenvalues of two parameter polynomial operator pencils of waveguide type, *Integral Equations and Operator Theory*, 56, no.3, 381-400, 2006.

6. B. Ünalmış Uzun, Generalized Frames in the Space of Strong Limit Power Functions, *Mediterranean Journal of Mathematics*, 10(1), 321- 332, 2013.

7. B. Ünalmış Uzun, Fractional Hankel and Bessel wavelet transforms of almost periodic signals, *Journal of Inequalities and Applications*, 2015:388, 2015.

8. B. Ünalmış Uzun, On the fractional Fourier and continuous Fractional wave packet transforms of almost periodic functions, *Journal of Inequalities and Applications*, 2017:126, 2017.

9. B. Ünalmış Uzun, On the Fractional Sums of Some Special Functions, *Results in Mathematics*, 74:50, 2019.

10. B. Uzun and H. Yücel, An Inverse Source Problem Connected Thermoacoustic Imaging In Multi-Layer Planar Medium, *Journal of Mathematical Imaging and Vision*, 61(6), 874-884, 2019.

11. D. Elmas and B. Ünalmış Uzun, Inverse solution of thermoacoustic wave equation for cylindrical layered media, *Frontiers in Physics*, March 2022.
https://doi.org/10.3389/fphy.2022.736555

12. M. Taşdemir, E. Özkara Canfes and Banu Uzun, On Caputo Fractional Bertrand Curves in E^3 and E_1^3, *Filomat*, 38(5), 1681-1702, 2024. https://doi.org/10.2298/FIL2405681T

7. 2. Journal Publications (Non SCI-Expanded)
1. B. Ünalmış Uzun, A Note on the Operator Equation AX- XB = Y, *International Mathematical Forum*, 5, no. 65, 3211-3222, 2010.

7.3. International Conference Papers

1. Partington, J.R., Unalmis, B. "Representations of shift-invariant operators", In Beghi, A., Finesso, L., and Picci, G. editors, *Mathematical Theory of Networks and Systems*, Proc. MTNS-98 Padua, 519-522, Il Poligrafo, Padova, 1998.
2. H. Bayıntır, D. Elmas, M. İdemen, B. Uzun, M. Karaman, "Thermoacoustic Image Reconstruction Based on Layered Tissue Model," *SPIE Medical Imaging*, Orlando, Florida, Feb 11 – 16, 2017.
3. D. Elmas, B. Uzun, M. İdemen, M. Karaman, "Cross-Sectional Thermoacoustic Imaging Using Multi-Layer Cylindrical Media," *32nd International Union of Radio Science General Assembly and Scientific Symposium (URSI GASS)*, Montreal, Canada, Aug 19–26, 2017.

7.4. Book Chapters

7.5. National Journal Publications

7.6. National Conference Papers

1. N. Çolakoğlu, M. Hasanov and B. Ünalmış Uzun, İki Parametreli Kuadratik Operatör Polinomların Spektral Yapısı ve Asimptotları, *XVII. Ulusal Matematik Sempozyumu*, Bolu, 23-26 Ağustos 2004.
2. D. Elmas, B. Uzun, M. İdemen, M. Karaman, Meme ve Beyin Kesit Görüntülemesi İçin Termoakustik Dalga Denkleminin Dairesel Katmanlı Ortam Modeline Dayanan Ters Çözümü," *URSI-TÜRKİYE'2016 VIII. Bilimsel Kongresi,* ODTÜ, Ankara, 1-3 Eylül 2016.
3. H. Bayıntır, B. Uzun, M. İdemen, M. Karaman, "Termoakustik Ters Kaynak Probleminin Katmanlı Düzlemsel Ortam Modeli Kullanılarak Çözümü," *URSI-TÜRKİYE'2016 VIII. Bilimsel Kongresi,* ODTÜ, Ankara, 1-3 Eylül 2016.
4. D. Elmas, B. Uzun, M. İdemen, M. Karaman, "Çok Katmanlı Silindirik Yapılar İçin Termoakustik Dalga Denkleminin Ters Çözümü", *25. Sinyal İşleme ve İletişim Uygulamaları Kurultayı*, Antalya, 15-18 Mayıs 2017.
5. H. Bayıntır, B. Uzun, M. İdemen, M. Karaman, "Çok Katmanlı Düzlemsel Ortam İçin Termoakustik Dalga Denkleminin Çözümü", *25. Sinyal İşleme ve İletişim Uygulamaları Kurultayı*, Antalya, 15-18 Mayıs 2017.

7.7. Other Publications

1. M. Hasanov, N. Çolakoğlu, B. Ünalmış, On perturbations of two parameter operator pencils of waveguide type, *Abstracts of the International Workshop on Operator Theory and Applications (IWOTA)*, Newcastle upon Tyne, UK, 2004 (abstract).

8. Research Projects

8.1. Microwave Induced Thermoacoustic Imaging for Breast Cancer Diagnosis and Follow-up, 2014-2017, Tübitak-1003 (Researcher).

9. Administrative Positions and Employment History

9.1. Administrative Positions

DATES	UNIVERSITY/ INSTITUTION	POSITION
2001-2005	Istanbul Technical University	Member of Scholarship Committee
2003-2004	Istanbul Technical University	Associate Head of the Mathematics Department
2003-2004	Istanbul Technical University	Member of Accreditation Committee (ABET, EUA)
2007-2010	Işık University	Faculty Board (Assistant Professor Representative)
2008-	Işık University	Member of Scholarship Committee
2010-2017	Işık University	Member of Ways and Means Committee
2010-2015	Işık University	Associate Head of the Mathematics Department
2010-2019	Işık University	Erasmus Coordinator of the Mathematics Department
2011-2016	Işık University	Faculty Board (Associate Professor Representative)
2012-2018	Işık University	Faculty Executive Board (Associate Professor Representative)
2016-2019 2023-	Işık University	Head of the Mathematics Department
2016-2019	Işık University	Faculty Board
2016-2019 2023-	Işık University	Graduate School Board
2018-2021	Işık University	Faculty Quality Committee
2019-	Işık University	Faculty Board (Professor Representative)
2019-	Işık University	Faculty Executive Board (Professor Representative)

9.2. Employment History

DATES	TITLE	UNIVERSITY/ INSTITUTION	DEPARTMENT
1994-1999	Research Assistant	Istanbul Technical University	Mathematics
1999-2000	Dr. Res. Assistant	Istanbul Technical University	Mathematics
2000-2007	Asst. Prof.	Istanbul Technical University	Mathematics
2001-2003	Asst. Prof.	Yeditepe University (part-time)	Mathematics

2005-2007	Asst. Prof.	Işık University (part-time)	Mathematics
2007-2011	Asst. Prof.	Işık University	Mathematics
2011-2018	Assoc. Prof.	Işık University	Mathematics
2018-	Prof.	Işık University	Mathematics

10. Scientific and Professional Membership

1. Turkish Mathematical Society
2. European Mathematical Society

11. Awards and Honours

1. Scholarship for Ph.D., University of Leeds, October 1995-June 1999
   (The Council of Higher Education of the Republic of Turkey)

12. Courses Taught (Last Two Years)

Academic Year	Course	Lecture Hours Per Week			Number of Students
		Lec.	PS	Lab.	
2022-2023 (Spring)	Calculus II (2 sections)	3	2	0	83+73
2022-2023 (Spring)	Mathematics I	3	0	0	124
2023-2024 (Fall)	Calculus I (2 sections)	4	1	0	49+122
2023-2024 (Fall)	Calculus II	4	1	0	75
2023-2024 (Fall)	Differential Equations	4	1	0	73

13. Other Academic and Scientific Activities

13.1. Reviewer Activities

1. TWMS Journal of Applied and Engineering Mathematics
2. Journal of Fourier Analysis and Applications
3. Journal of Applied Mathematics
4. International Journal of of Differential Equations
5. Journal of Analysis

13.2. Editorship

1. TWMS Journal of Applied and Engineering Mathematics (Executive Editor, February 2011 – March 2013)

2. TWMS Journal of Applied and Engineering Mathematics (Associate Editor, May 2019- …)

14. Research Interests

1. Transform Methods
2. Operator Theory
3. Fractional Sums
4. Fractional Calculus