Başak AY SAYLAM, PhD

EDUCATION :

- **PhD**
  Florida Atlantic University, Dept. of Mathematical Sciences, USA, August 2010.

  "Unique Decomposition of Direct Sums of Ideals."

  Advisor: Prof. Lee C. Klingler, PhD.

- **MSc (completed the coursework** Bosphorus University, Dept. of Mathematics, October 2002- July 2004.

- **Undegraduate** Bosphorus University, Dept. of Mathematics, June 2002.

WORK EXPERIENCE

- Chair, Dept. of Mathematics, Izmir Institute of Technology, (January 2024 -)

- Prof., Dept. of Mathematics, Izmir Institute of Technology, (January 2022 -)

- Assoc. Prof., Dept. of Mathematics, Izmir Institute of Technology, (April 2015 - December 2021)

- Assist. Prof., Dept. of Mathematics, Izmir Institute of Technology, (January 2012 - March 2015)

- Lecturer Dr., Department of Mathematics, Statistics and Computer Science, The Ohio State University - Lima (Sept 2010- June 2011)

- Vice Director, Mathematics Learning Center, Florida Atlantic University (June 2009- August 2010)

- Teaching Assistant, Dept. of Mathematical Sciences, Florida Atlantic University (August 2004- August 2010)

- Research Assistant, Dept. of Mathematics, Bosphorus University (October 2002- July 2004)

PUBLISHED RESEARCH PAPERS:

- B. Ay Saylam, E. Gürbüz, H. Hamdi, "w-locally isomorphic torsionless modules over weakly Matlis domains" , *Communications in Algebra*, 1-13, 2024.

- B. Ay Saylam, E. Gürbüz, H. Hamdi, "Unique decomposition into ideals for strong Mori domains" , *Journal of ALgebra and its Applications*, 22 (12), 235025, 2023.

- B. Ay Saylam, E. Gürbüz, "Unique decomposition into ideals over Marot rings", *Communications in Algebra*, 50 (12), 5303-5313, 2022.

- B. Ay Saylam, H. Hamdi, "ES-w-stability" , *Communications in Algebra*, Volume 49 (2021), Issue No: 8, 3457-3476.

- B. Ay Saylam, "Stability in commutative rings" , *Turkish Journal of Mathematics*, 44 (2020), 801-812.

- B. Ay Saylam, "The group of invertible ideals of a Prüfer ring" , *Proceedings - Mathematical Sciences*, Volume 130, Article number: 11 (2020).

- B. Ay Saylam, L. Klingler, "Locally isomorphic torsionless modules over domains of finite character", *Journal of Algebra and its Applications*, 1950138 (2019), 13 pages.

- B. Ay Saylam, "Corrigendum: On density Theorems for Rings of Krull type with zero divisors" , *Turkish Journal of Mathematics*, DOI: 10.3906/mat-1610-79.

- B. Ay Saylam, "On density Theorems for Rings of Krull type with zero divisors" , *Turkish Journal of Mathematics*, 38 (2014), 614-624.

- B. Ay, "Unique Decomposition into Ideals for Reduced Commutative Noetherian Rings, II", *Journal of Pure and Applied Algebra*,216 (2012), 743-751 .

- B. Ay, L. Klingler "Unique Decomposition into Ideals for Reduced Commutative Noetherian Rings", *Transactions of the American Mathematical Society*, 363 (2011) 7, 3703-3716.

PUBLISHED ARTICLES IN POPULAR SCIENCE JOURNALS:

- "Ayrı Düşen Çiftler", Matematik Dünyası, 14(1) (2005), 27-29.

DIRECTED PhD THESES :

- E. Canan, " Comparable Overrings of Marot Rings.", In progress.

- E. Gürbüz, " Krull-Schmidt Properties over non-Noetherian domains.", July 2022.

DIRECTED MSc THESES :

- M. Yeşil, "Approximation Theorems for Krull Domains", July 2014.

- E. Gürbüz, " Krull-Schmidt Properties over non-Noetherian domains.", July 2016.

- İ. Susuzlu, "Almost Local-Global Rings", July 2017.

DIRECTED BSc Projects :

- B. Dönmez, "Linear Codes and their Algebraic Background", 2023-2024.

- T. Ataç, "Chinese Remainder Theorem", 2022-2023.

- Z. G. Aygün, "Noetherian Domains", 2021-2022.

- N. Ağagül, " Properties and Generalizations of Fibonacci Numbers and Golden Ratio ", 2020-2021.

- Y. Doku, " Sylow Theorems and Applications", 2020-2021.

- F. Altınay, "Field Extensions and their Applications", 2015-2016.

ACADEMIC AWARDS AND SUPPORT

- Career Development Program, TUBITAK, 2014-2017.

- UBYT, TUBITAK, 2014.

- IZTECH Foundation, IZTECH, 2014.

- Association of Women in Mathematics-NSF Travel Grant, 2011.

- Financial support for the Workshop for new faculty and graduate students on Lattice-Ordered Groups and MV-Algebras, NSF and The Department of Mathematics and Statistics at Bowling Green State University, 2009.

- The Dr. Daniel B. Newell and Aurel B. Newell Doctoral Fellowship, Florida Atlantic University, 2008 - 2009.

- Multiple Travel Grants, Florida Atlantic University, 2004-2009.

- Graduate School Scholarship, Florida Atlantic University, 2004 -2010.

- University Scholorship, National Education Foundation, 1997 - 2001.

TALKS GIVEN IN CONFERENCES, SEMINARS AND WORKSHOPS:

- "Locally isomorphic torsionless modules over domains of finite character", Antalya Algebra Days XIX, Şirince, May 2017.

- "Density Theorems for rings of Krull type", Antalya Algebra Days XVI, Antalya, May 2014.

- "Valuation Domains", "Prüfer Domains", "H-Local Domains" , 2nd Workshop on Rings, Modules and Algebras, IZTECH, June 24-28, 2013.

- "Unique Decomposition for Reduced Commutative Noetherian Rings", Antalya Algebra Days XIV, Cesme, May 2012.

- "Unique Decomposition of Direct Sums of Ideals", IZTECH, Izmir, June 2011.

- "The Krull-Schmidt Property for Direct Sums of Ideals", Athens Algebra Seminar, Ohio University, Athens, OH, USA, April 2011.

- "Unique Factorization in a Number Field", Seminar, North Ohio University, Ada, OH, 15 March 2011.

- "Krull Schmidt Property for Ideals of Reduced Commutative Noetherian Rings",

    - Joint Mathematics Meetings, Special Session on Local Commutative Rings, New Orleans, LA, USA, Jan 6-9, 2011.
    - The Lima Algebra Seminar, Lima, OH, USA, October 2010.
    - The OSU-OU Ring Theory Seminar, Columbus, OH, USA, Ocotber 2010.
    - Southern Regional Algebra Conference, Auburn Universitesy-Montgomery, AL, USA, March 26-28, 2010.

- "Unique Decomposition into Ideals for Reduced Commutative Noetherian Rings",

    - Math Colloquium, Florida Gulf Coast University, Fort Myers, FL, USA, February 2010.
    - Florida Atlantic University, Boca Raton, FL, USA, October 2009.
    - Southern Alabama University, Mobile, AL, ABD, March 2009.
    - Algebra Seminar, Florida Atlantic University, Boca Raton, FL, October 2008.
    - The Southern Regional Algebra Conference (with recognition of the retirement of K.M. Rangaswamy), Colorado University-Colorado Springs, Colorado Springs, CO, USA, October 2008.
    - The International Conference on Ring and Module Theory, Hacettepe University, Ankara, August 2008.

JOURNALS REFEREED:

- Turkish Journal of Mathematics.

- Journal of Algebra and its Applications.

- Italian Journal of Pure and Applied Mathematics.

- Hacettepe Journal of Mathematics and Statistics.

COURSES GIVEN:
Undergraduate:

- Linear Algebra I, II (IZTECH).

- Basic Calculus I, II (IZTECH).

- Fundamentals of Mathematics I, II (IZTECH).

- College Algebra (OSU - Lima).

- Precalculus (FAU, OSU - Lima).

- Algebra Trigonometry and Applications (OSU - Lima).

- Calculus I, II (FAU).

- Methods in Calculus (FAU).

- Trigonometry (FAU).

Graduate:

- Commutative Algebra I, II (IZTECH).

- Basic Abstract Algebra (IZTECH).

- Algebraic Number Theory(IZTECH).

VOLUNTEER WORK:

- Mathematics Workshop 101, 2024.

- 2nd (2013), 3rd (2014) Workshops on Rings, Modules, and Algebras.

- FAU Math Days, 2005-2010.

- International Conference on Combinatorics, Graph Theory and Computing, 2005-2010.

COMPUTER SKILLS

- C++, Pascal.

- Maple, Mathematica.

LANGUAGES:

- Turkish (Native)

- English (TOEFL IBT 97).

PROFESSIONAL MEMBERSHIPS:

- American Mathematical Society.

- Turkish Mathematical Society.