

**Contact Information** Sabancı University  
Faculty of Engineering  
& Natural Sciences  
Orta Mahalle, Üniversite Cad.  
Tuzla/ İstanbul  
34956 TURKEY

**Phone:** (216) 483-9513  
**E-mail:** tbayraktar@sabanciuniv.edu  
**URL:** myweb.sabanciuniv.edu/tbayraktar

**Education** **2006–2012** Ph.D. Mathematics,  
Indiana University, Bloomington, USA  
**Dissertation Advisor:** Eric Bedford

**2003–2005** M.Sc Mathematics,  
Middle East Technical University (METU), Turkey

**1998–2002** B.Sc Mathematics,  
Middle East Technical University (METU), Turkey

**Research Interests** Several Complex Variables, Complex Geometry, Holomorphic Dynamics

**Appointments** **03.2022–present** Tosun Terzioğlu Chair, Sabancı University  
**02.2020–present** Associate Professor, Sabancı University  
**06.2017–02.2020** Assistant Professor, Sabancı University  
**08.2016–05.2017** Visiting Assistant Professor, University of Hartford  
**08.2014–06.2016** Philip T. Church Postdoctoral Fellow, Syracuse University  
**08.2013–06.2014** Visiting Assistant Professor, Indiana University, Bloomington  
**07.2012–07.2013** Lecturer, Johns Hopkins University  
**08.2006–05.2012** Associate Instructor, Indiana University, Bloomington

**Publications**

1. **T. Bayraktar and T. Bloom and N. Levenberg**, Random Polynomials in Several Complex Variables, to appear in *Journal d'Analyse Math.*, arXiv: 2112.00880.
2. **T. Bayraktar and E. Karaca**, An Exponential Rarefaction Result for Sub-Gaussian Real Algebraic Maximal Curves, to appear in *Comptes Rendus Mathématique*, ArXiv:2212.02343.
3. **T. Bayraktar and A. U. Ö. Kişisel**, Expected Multivolumes of Random Amoebas, *J. Complexity*, 80 (2024) paper no 101802.
4. **T. Bayraktar and Ç. Çelik**, Zero Distribution of Random Bernoulli Polynomial Mappings, submitted, *Electron. J. Probab.* 28 (2023), article no. 128, 1–15.
5. **T. Bayraktar and M. Efe**, On the dynamics of asymptotically minimal polynomials, *J. Approx. Theory*, 295 (2023) Paper no 105956, 17pp.

6. **T. Bayraktar and S. Hussung, N. Levenberg and M. Perera**, Pluripotential theory and convex bodies: A Siciak-Zaharjuta Theorem, *Comput. Methods Funct. Theory*, 20 (2020) no. 3-4, 571-590.
7. **T. Bayraktar**, Mass Equidistribution for Random Polynomials, *Potential Anal.*, 53 (2020), no. 4, 1403-1421.
8. **T. Bayraktar and D. Coman and G. Marinescu**, Universality results for zeros of random holomorphic sections, *Trans. Amer. Math. Soc.*, 373 (2020), no. 6, 3765-3791.
9. **T. Bayraktar and T. Bloom, N. Levenberg and C. H. Lu**, Pluripotential theory and convex bodies: Large Deviation Principle, *Ark. Mat.*, 57 (2019), no. 2, 247-283.
10. **T. Bayraktar**, On global universality for zeros of random polynomials, *Hacet. J. Math. Stat.*, 48 (2019), no. 2, 384-398.
11. **T. Bayraktar, D. Coman, H. Herrmann and G. Marinescu**, A survey on zeros of random holomorphic sections, *Dolomites Res. Notes Approx.*, 11 (2018), no. 4, Special issue dedicated to Norm Levenberg, 1-19.
12. **T. Bayraktar**, Almost sure invariance principle for non-autonomous holomorphic dynamics in  $\mathbb{P}^k$ , *Conform. Geom. Dyn.*, 22 (2018), 45-61.
13. **T. Bayraktar**, Expected number of real roots for random linear combinations of orthogonal polynomials associated with radial weights, *Potential Anal.*, 48 (2018), no. 4, 459-471.
14. **T. Bayraktar and T. Bloom, and N. Levenberg**, Pluripotential Theory and Convex Bodies, *Sbornik Mathematics*, 209 (2018), no. 3, 67-101.
15. **T. Bayraktar**, Asymptotic normality of linear statistics of zeros of random polynomials, *Proc. of Amer. Math. Soc.*, 145 (2017), no. 7, 2917-2929.
16. **T. Bayraktar**, Zero distribution of random sparse polynomials, *Michigan Math. J.*, 66 (2017), no. 2, 389-419.
17. **T. Bayraktar**, Equidistribution of zeros of random holomorphic sections, *Indiana Univ. Math. J.*, 65 (2016), no. 5, 1759-1793.
18. **T. Bayraktar**, Ergodic properties of random holomorphic endomorphisms of  $\mathbb{P}^k$ , *Int. Math. Res. Not. IMRN*, (2015), no. 4, 927-959.
19. **T. Bayraktar and S. Cantat**, Constraints on automorphism groups of higher dimensional manifolds, *J. Math. Anal. Appl.* 405 (2013), no. 1, 209-213.
20. **T. Bayraktar**, Equidistribution toward the Green current in big cohomology classes, *Internat. J. Math.*, 24 (2013), no. 10, 1350080, 25 pp.
21. **T. Bayraktar**, Green currents for meromorphic maps of compact Kähler manifolds, *J. Geom. Anal.* 23 (2013), no. 2, 970-998.

## Preprints

1. **T. Bayraktar and A. U. Ö. Kişisel**, Expected depth of random real algebraic plane curves, submitted, arXiv: 2110.03198.
2. **T. Bayraktar**, Sampling property of Fekete points for random holomorphic sections, submitted, arXiv:2004.02773.

<b>Funding</b>	<ul style="list-style-type: none"> <li>• TÜBİTAK &amp; German DAAD Bilateral Cooperation Grant, PI, (01/01/2022-01/01/2024)</li> <li>• TÜBİTAK ARDEB-1001/119F184, PI, (15/11/2019-15/11/2022)</li> <li>• TÜBİTAK ARDEB-3501/118F049 Career Development Grant, PI, 15/11/2018-15/11/2021</li> <li>• Turkish Academy of Sciences, PI (as a part of TUBA-GEBIP Award), 01.2020-01.2023</li> <li>• The Science Academy, Turkey, PI (as a part of BAGEP Award), 05.2019-05.2021</li> <li>• TÜBİTAK-BİDEB 2232/118C006, PI, 01/02/2018-01/02/2020</li> <li>• TÜBİTAK ARDEB-1001/118F405 , Researcher, 15/03/2019-15/03/2022</li> <li>• Sabancı University Internal Academic Activity Fund 06/2018, 02/2019, 06/2020, 06/2022</li> <li>• Turkish Mathematics Association (TMD-MAD) Mathematical Research Fund 06/2018, 01/2019, 01/2022</li> </ul>
<b>Awards &amp; Honors &amp; Fellowships</b>	<ul style="list-style-type: none"> <li>• Tosun Terzioğlu Chair of Mathematics, Sabancı University, March 2022</li> <li>• Mathematics Foundation of Turkey, Prof. Dr. Masatoshi Gündüz İkedâ Research Award, 2019</li> <li>• Turkish Academy of Sciences, Outstanding Young Scientist Award (TUBA-GEBIP), 2019</li> <li>• Middle East Technical University Prof. Dr. Mustafa N. Parlar Foundation, Research Incentive Award, 2019</li> <li>• The Science Academy Turkey, Young Scientist Award (BAGEP), 2019</li> <li>• Associate Professorship from YÖK, 9/2018</li> <li>• TÜBİTAK-BİDEB 2232 Scholarship through project BİDEB-118C006</li> <li>• American Mathematical Society Simons Travel Grant, 2015-2017</li> <li>• Philip T. Church Postdoctoral Fellowship, Syracuse University, 2014-2016</li> <li>• Indiana University College of Art and Science Travel Grant, 2012</li> <li>• Indiana University Mathematics Department Travel Grant, 2008, 2010</li> <li>• Indiana University Associate Instructorship 2006-2012</li> <li>• TÜBİTAK, Graduate Scholarship 2003-2005</li> <li>• Turkish Education Association, Undergraduate Scholarship, 1999-2000</li> </ul>
<b>Supervising &amp; Mentoring</b>	<ul style="list-style-type: none"> <li>• Afrim Bojik, MSc, Sabancı University, 2019.</li> <li>• Çiğdem Çelik, PhD student, Sabancı University, 2023.</li> <li>• Melike Efe, PhD student, Sabancı University, 2023.</li> <li>• Afrim Bojik, PhD, Sabancı University, expected June 2024.</li> <li>• Ozan Günyüz, Postdoctoral Fellow, Sabancı University, 01.2019-01.2021</li> <li>• Emel Karaca, Postdoctoral Fellow, Sabancı University, 11.2019-11.2021</li> </ul>

**Recent Invited  
Conference  
Talks**

- Holomorphic Day in Copenhagen, Denmark November 2023
- Geometric and Topological Properties of Random Algebraic Varieties, Cologne Germany, October 2023
- Complex Geometry, Dynamical Systems and Foliation Theory, CIRM Luminy France, October 2022
- Dynamical systems and systems of equations, Centro De Giorgi - Pisa Italy, June 2022
- Conference on Constructive Approximation of Functions, Poland, September 2021
- Taipei Conference on Complex Geometry, Sinica Taiwan, December 2019
- Workshop on Zeros of random polynomials, American Institute of Mathematics, San Jose USA, June 2019
- 31st Turkish National Mathematics Symposium, Erzincan, Plenary Address, Erzincan September 2018
- Random Matrix Theory 2018, Winter School, Nesin Mathematics Village, February 2018
- Computational Methods and Function Theory Conference, Lublin Poland, July 2017
- Midwest Several Complex Variables Conference, University of Toledo USA, May 2016

**Recent Seminar  
& Colloquia  
Talks**

- Syracuse University, Colloquium, USA, October 2021
- Indiana University, Several Complex Variables Seminar, October 2021
- Texas A&M Qatar, Virtual East-West SCV Seminar, March 2021
- Indian Statistical Institute, Colloquium, February 2021
- Koç University, Mathematics Seminar, Turkey, October 2019
- Bilkent University, Analysis Seminar, Turkey, March 2019
- Bochum-Essen-Köln-Wuppertal Joint Seminar on Complex Algebraic Geometry and Complex Analysis, July 2018
- Université d'Aix-Marseille Analysis Seminar, France, March 2018
- Istanbul Analysis Seminars, October 2017, December 2011, 2012 and 2013
- Bosphorus University Colloquium, Istanbul, Turkey October 2017
- Mimar Sinan Fine Arts University Colloquium, Istanbul, Turkey October 2017
- Gebze Technical University Colloquium, Istanbul, Turkey December 2017
- University of Auckland New Zealand, Analysis Seminar, July 2016
- Syracuse University, Analysis Seminar, USA, 2014-2016, several times
- Indiana University, Several Complex Variables Seminar, USA, 2011-2015 several times
- Ohio State University, Combinatorics Seminar, ,USA, June 2014
- IUPUI, Mathematical Physics Seminar, USA, November 2013
- University of Michigan, Complex Analysis and Geometry Seminar, USA, October 2013
- Johns Hopkins University, Complex Analysis Seminar, USA, October & November 2012
- Notre Dame University, Complex Analysis Seminar, USA, April 2011
- IUPUI, Dynamical Systems Seminar, USA, April 2011
- Bosphorus University Colloquium, Istanbul, Turkey July 2009

**Recent Academic Visits**

- University of Cologne (July 2018, March 2021, April 2022, October 2023)
- Syracuse University (October 2021, April 2024)
- Indiana University (October 2021, January 2024)
- CIRM, Luminy France (January 2020, October 2022)
- University of Barcelona (April 2023)
- Université d'Aix-Marseille (March 2018)
- University of Auckland (July 2016)

**Professional Memberships**

- American Mathematical Society
- Turkish Mathematical Society
- Science Academy, Turkey (BAGEP)
- Turkish Academy of Sciences (GEBIP)

**Service**

- Co-Director, Istanbul Center for Mathematical Sciences (IMBM), 2022-2024.
- TÜBİTAK ARDEB 1001 projects MFAG, consultant & panelist 2019-2023.
- TÜBİTAK ARDEB 1002 projects MFAG reviewer 2023.
- Refereed for *Trans. Amer. Math. Soc.*, *J. Differential Geom.*, *J. Geom. Anal.*, *J. Math. Anal. Appl.*, *Indiana Univ. Math. J.*, *J. Inst. Math. Jussieu*, *J. Approx. Theory*, *Comp. Methods Func. Theory* and *Turkish J. Math.*
- Reviewer for AMS Mathematical Reviews and Zentralblatt Math.
- Transfer Committee, Sabancı University, 2017-2023
- Discipline Committee, Sabancı University, 2017-2023
- Organizer, Randomness in Complex Analysis and Complex Geometry Workshop, June 2022, Nesin Mathematics Village, Izmir/Turkey.
- Co-Organizer, Research Workshop on Random Real Algebraic Geometry, October 2019, METU NCC, Cyprus
- Co-Organizer, Frontiers in Several Complex Variables and Functional Analysis, May 2019, METU, Ankara/Turkey
- Co-Organizer, Random Real Algebraic Geometry Workshop, January 2019, Nesin Mathematics Village, Izmir/Turkey
- Co-Organizer, Randomness in Complex Analysis and Complex Geometry, June 2018, Nesin Mathematics Village, Izmir/Turkey
- Co-Organizer, Istanbul Analysis Seminars since Fall 2017.
- Co-Organizer, AMS special session on Randomness in Complex Geometry, April 2017, Bloomington IN, USA.

**Synergic Activities**

- Nesin Mathematics Village, Lecturer, 2017-2023
- Math Club Lecturer, Syracuse University, 2014-2015.

**Teaching  
Experience**

*At Sabanci University*

MATH 505 Complex Analysis  
MATH 524 Probability Theory  
MATH 523 Riemann Surfaces  
MATH 501 Analysis I  
MATH 502 Analysis II  
MATH 68003 Special Topics in Several Complex Variables  
MATH 301 Introduction to Mathematical Analysis  
MATH 305 Complex Calculus  
MATH 203 Introduction to Probability  
MATH 201 Linear Algebra

*At University of Hartford*

MAT 344 Advanced Engineering Mathematics, Fall 2016, Spring 2017  
MAT 145 Calculus II, Fall 2016  
MAT 442 Introduction to Complex Analysis, Spring 2017

*At Syracuse University*

MAT 485 Differential Equations & Linear Algebra, Spring 2016  
MAT 285 Calculus for Life Sciences, Fall 2015  
MAT 331 Linear Algebra, Fall 2014  
MAT 295 Calculus, Spring 2015

*At Indiana University*

M119 Brief Survey of Calculus: Fall 2010, Spring 2010, Summer 2012  
M118 Finite Mathematics: Summer 2010, Spring 2011, Fall 2013  
M211 Calculus I, Fall 2013  
M303 Linear Algebra, Spring 2014, Summer 2014

*At Johns Hopkins University*

110.405 Analysis I, Spring 2013  
110.201 Honors Multivariable Calculus, Spring 2013  
110.107 Calculus II for Biological and Social Sciences, Fall 2012

*At Indiana University as Associate Instructor*

M513-514 Graduate Complex Analysis Series, Grader, Fall 2011-Spring 2012  
M311 Vector Calculus, Recitation Leader, Fall 2011  
M541 Graduate Partial Differential Equations, Grader, Summer 2008