

# CURRICULUM VITAE

**Cem Yalçın Yıldırım**

## PERSONAL DATA

**Birth:** July 8, 1961 in Bloomington, Indiana, U.S.A.

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## ACADEMIC DEGREES

- Professor; Mathematics Department, Boğaziçi University, 2003
- Associate Professor; Mathematics Department, Boğaziçi University, 2002
- Doçent; Inter-university Council of Turkey, 1993
- Assistant Professor; Mathematics Department, Bilkent University, Ankara, Turkey 1990
- Ph.D.; Department of Mathematics, University of Toronto, 1990
- B.S.; Physics Department, METU (Middle East Technical University), Ankara, Turkey, 1982

## EMPLOYMENT HISTORY

- 10/2003 - : Professor; Math. Dept., Boğaziçi University
- 09/2009 - 12/2009 : On sabbatical leave; Member; School of Mathematics, Institute for Advanced Study, Princeton NJ, USA
- 11/2002 - 10/2008 : Part-time researcher, TÜBİTAK Feza Gürsey Institute, Istanbul
- 10/2002 - 10/2003 : Associate Professor; Math. Dept., Boğaziçi University
- 02/2002 - 10/2002 : Instructor; Math. Dept., Boğaziçi University
- 03/1999 - 07/1999 : Visiting member; MSRI (Mathematical Sciences Research Institute), Berkeley, CA, USA

- 08/1995 - 01/1996 : On sabbatical leave at Dept. of Math. and Comp. Sci., SJSU (San Jose State University), San Jose, CA, USA
- 02/1992 - 01/2002 : Assistant Professor; Math. Dept., Bilkent University
- 08/1991 - 01/1992 : Adjunct Assistant Professor; Fordham University and Manhattan College, New York City
- 09/1990 - 08/1991 : Assistant Professor; Math. Dept., Bilkent University
- 1983-1990 : Graduate student, Research and Teaching Assistant; Dept. of Mathematics, University of Toronto
- 1982-1983 : Graduate student, Teaching Assistant; Dept. of Physics, SUNY (State University of New York) at Stony Brook
- 1980-1982 : Undergraduate assistant; Math. Dept., METU

#### **SCHOLARSHIPS and AWARDS**

- Boğaziçi University Foundation High Achievement in Research Award, 2017
- Co-recipient of the Frank Nelson Cole Prize in Number Theory given by the American Mathematical Society, 2014
- M. Gündüz İkedâ Research Award for 2006 from Mathematics Foundation, Mathematics Department, METU, Ankara, Turkey, 2007
- Boğaziçi University Foundation High Achievement in Research Award, 2006
- TÜBİTAK NATO-B2 Research Fellowship (Scientific and Technical Research Council of Turkey) and MSRI membership, 03/1999 - 07/1999
- Research Fellowship, University of Toronto, 1986-1990
- University of Toronto Open Fellowship, 1983-1986
- Graduate Scholarship, SUNY at Stony Brook, 1982-1983
- Student Scholarship, TÜBİTAK, 1977-1982

#### **GRANTS**

- Funding for the stay (09/2009 - 12/2009) as member at the Institute for Advanced Study in Princeton provided by The Oswald Veblen Fund.
- Sabbatical leave (02/2009 - 02/2010) granted by Boğaziçi University

- Travel expenses for participation in conferences and seminar talks provided by the organizers of the events and/or by Boğaziçi University (2002-2011)
- Participation in the workshop ‘Analytic Number Theory’ (03/2008) at Mathematisches Forschungsinstitut Oberwolfach, Germany funded by the said institute and Boğaziçi University Foundation.
- Visiting (09/2007) Instituto de Matemáticas UNAM, Campus Morelia, Mexico funded by UNAM, Mexico and by Boğaziçi University.
- Visiting (09/2006) Instituto de Matemáticas UNAM, Campus Morelia, Mexico funded by UNAM, Mexico.
- Participation in the meeting ‘Theory of the Riemann zeta and allied functions’ (9/2004) at Mathematisches Forschungsinstitut Oberwolfach, Germany funded by the said institute and Boğaziçi University Foundation.
- Research at MSRI (03/1999 - 07/1999) funded by TÜBİTAK and MSRI.
- Sabbatical leave (08/1995 - 01/1996) granted by Bilkent University.
- Participation in ‘Advanced Workshop on Arithmetic and Algebraic Geometry’ at ICTP, Trieste, Italy (09/1992) supported by TÜBİTAK and ICTP.

#### **SCHOLARLY and PROFESSIONAL DUTIES**

- Editor for *Turkish Journal of Mathematics*, 02/2009 - 02/2015.
- Reviewer for *Zentralblatt für Mathematik*, 06/2000 -
- Reviewer for *Mathematical Reviews*, 12/1998 -
- Member of the Organizing Committee, ‘International Workshop on Number Theory (on the occasion of 70-th birthday of Prof. M.G. Ikeda)’, METU, July 2-5, 1997.
- Member of the Organizing Committee of ‘Summer School on Number Theory and its Applications’ Bilkent University, July 29 - Aug. 9, 1996, and editor of its Proceedings.
- Member of the Executive Committee, question developer, coach and coordinator (1993) for Mathematical Olympiads, TÜBİTAK, 1993-1995.
- Referee for many articles in various journals
- Jury member/referee for several academic promotions and awards, 2005 -

- Member of the Managing Committee of IMBM (Istanbul Center for Mathematical Sciences), 2006-2012
- Member of the Scientific Committee, *National Mathematics Symposium of Turkey*, 2006-2011.
- Member of the Scientific Steering Committee of IMBM (Istanbul Center for Mathematical Sciences), 2012-
- Member, Science Academy of Turkey (Bilim Akademisi), 2017-
- Member, Scientific Committee of 31st Journées Arithmétiques, İstanbul, 2019.
- Member of the Prize Committee of the 8th European Congress of Mathematics, 2020.
- Member of the Scientific Advisory Board of EMS (European Math. Soc.) Press, 2020- .

#### MEMBERSHIP

- Member, The American Mathematical Society, 1983 -
- Member, Türk Matematik Derneği, 1993 - 2008.

#### TEACHING EXPERIENCE

**Graduate courses:** Complex Analysis, Introduction to the proof of Fermat's Last Theorem, Algebraic Number Theory, Analytic Number Theory

**Undergraduate courses:** Precalculus, Calculus, Discrete Mathematics, Abstract Mathematics, Complex Calculus, Advanced Calculus, Differential Equations, Galois Theory, Elementary Number Theory,

**Independent study supervised:** Senior undergraduate students' projects: a total of 8 students.

#### GRADUATE STUDENT SUPERVISION

##### Ph.D. Theses:

- Natalia A. Zheltukhina; "Power series with restrictions on sections or tails", Bilkent University, 2002.
- Yunus Karabulut, "Vertical distribution problems in zeta-function theory", Boğaziçi University, 2015.

### **M.Sc. Theses:**

- Gülnihal Yücel, “Aspects of Fibonacci numbers”, Bilkent University, 1994.
- Altan Erdoğan, “Some cases of the Generalized Fermat Equation”, Boğaziçi University, 2008.
- Yunus Karabulut, “Some mean-value problems about Dirichlet  $L$ -functions and the Riemann zeta-function”, Boğaziçi University, 2009.
- Deniz Ali Kaptan, “Some mean-values related to Dirichlet  $L$ -functions”, Boğaziçi University, 2009.
- Kübra Benli, “The mean values of the functional equation factor  $\chi_{\psi_1}$  at the zeros of  $\zeta^{(k)}(s)$  and  $L^{(k)}(s, \psi_2)$ ”, Boğaziçi University, 2015.
- Ertan Elma, “Average values of the functional equation factors at the zeros of derivatives of Dirichlet  $L$ -functions”. Boğaziçi University, 2015.

### **EDUCATIONAL DEVELOPMENT ACTIVITIES**

- Work in departmental committees for the shaping of the undergraduate and graduate curricula and examining applicants for graduate study.
- Developing the contents of some courses; opening new elective courses.
- Involving students in research and writing in senior projects.
- Being the academic advisor of some students.
- Jury member for many graduate theses.
- Preparing questions and doing coaching for Mathematical Olympiads, 1993-1995.

### **SEMINAR TALKS**

- University of Toronto, Math. Dept., Number Theory Seminar talk: ‘Zeta-function theory: Pair correlation and value distribution’, Apr. 3, 1990.
- January 1991 San Francisco Meetings of the American Math. Soc. with a contributed paper ‘A sum over the zeros of partial sums of  $e^x$ ’, *AMS Abstract* 863-30-244.
- International Workshop on Geometry and Analysis, Mediterranean University, Antalya, Turkey, July 1992, with two lectures on analytic number theory.

- Bilkent Math. Dept. Seminar talk: ‘The tails of the exponential series’, Feb. 25, 1993.
- METU Math. Dept. General Seminar talk: ‘The tails of the exponential series’, Mar. 11, 1993.
- Complex Analysis Week at METU, April 1993, with a talk titled ‘The Partial Sums and Tails of the Exponential Series’.
- Algebraic Geometry and Arithmetic Workshop, Mediterranean University, Antalya, Turkey, June 1993, with a survey talk on ‘Irrational Numbers and the Irrationality of  $\zeta(3)$ ’.
- Lecturer, Summer School for preparing students for International Mathematics Olympiad, Trakya University, Edirne, Turkey, Aug. 1993.
- Schönheit im Chaos, an exhibition at the German Cultural Institute, Ankara, Turkey, Sept. 30, 1994, with an invited talk on fractals.
- Bilkent Math. Dept. Seminar talk: ‘On the derivatives of Dirichlet  $L$ -functions’, Oct. 12, 1994.
- San Jose State University Algebra and number theory Seminar talk: ‘On the derivatives of the Riemann zeta-function’, Oct. 25, 1995.
- San Jose State University Dept. of Math. and Comp. Sci. Colloquium talk: ‘The exponential series’, Nov. 2, 1995.
- Bilkent Math. Dept. Seminar talk: ‘Primes in arithmetic progressions in short intervals’, June 3, 1996.
- Summer School on Number Theory and its Applications, Bilkent University, July 29 - Aug. 9, 1996, as member of the Organizing Committee and with a survey lecture ‘Primes in Short Intervals’.
- METU Math. Dept. General Seminar talk: ‘The error term in the prime number theorem’, Apr. 30, 1998.
- Feza Gürsey Institute, Istanbul, Seminar talk: ‘On the distribution of prime numbers’, July 23, 1998.
- Ankara University Math. Dept. General Seminar talk: ‘The error term in the prime number theorem I’, Nov. 18, 1998.
- Ankara University Math. Dept. General Seminar talk: ‘The error term in the prime number theorem II’, Nov. 25, 1998.

- Visiting member, Mar. - July 1999, Program on Random Matrix Models and Their Applications, MSRI Berkeley. MSRI Seminar talk: ‘Relations among pair-correlation functions for Dirichlet’s  $L$ -functions’, June 17, 1999.
- METU Math. Dept. General Seminar talk: ‘On a lower-bound method in the theory of distribution of primes’, May 5, 2000.
- Colloquium on Number Theory, University of Debrecen, Hungary, with a talk titled ‘On a lower-bound method for the distribution of primes’, July 6, 2000.
- METU Math. Dept. General Seminar talk: ‘On the distribution of prime numbers’, Oct. 18, 2001.
- Sabancı University Seminar talk: ‘On the distribution of prime numbers’, Nov. 12, 2001.
- Boğaziçi University Seminar talk: ‘On the distribution of prime numbers’, Dec. 12, 2001.
- Bilkent University Math. Dept. Analysis Seminar talk: ‘Primes in short intervals’, Dec. 25, 2001.
- Boğaziçi University Math Club talk: ‘ $\zeta(3)$  is irrational’, Apr. 17, 2002.
- 2002 International Conference on subjects related to Clay problems, Chonbuk National University, South Korea; Invited speaker, with three talks on ‘The Riemann zeta-function and the distribution of primes’, July 9-11, 2002.
- Yonsei University, Seoul, South Korea, two seminar talks: ‘Sections and tails of the exponential series’, and ‘Hardy-Littlewood’s heuristics for the twin-primes conjecture’, July 12-13, 2002.
- İstanbul Bilgi University Seminar talk: ‘Primes in short intervals’, Oct. 11, 2002.
- Boğaziçi University Math. Dept. Colloquium talk: ‘Small gaps between prime numbers’, Apr. 9, 2003.
- Turkish Mathematical Association İstanbul Mathematics Seminar talk: ‘The history of prime numbers’, May 12, 2003.
- Yonsei University, Seoul, South Korea; Invited speaker: ‘Six lectures on the distribution of prime numbers’, June 25 - July 7, 2003.
- XVI National Mathematics Symposium of Turkey held in Van; Invited talk: ‘On the distribution of prime numbers’, Sept. 10, 2003.

- Feza Gürsey Institute, Istanbul, Seminar talk: ‘Recent progress on the distribution of prime numbers’, Sept. 24, 2003.
- METU Math. Dept. General Seminar talk: ‘On the distribution of prime numbers’, Nov. 6, 2003.
- Mathematisches Forschungsinstitut Oberwolfach, Germany; ‘Theory of the Riemann zeta and allied functions’ meeting seminar talk: ‘An application of the triple correlations of a short divisor sum to the distribution of primes’, Sept. 22, 2004
- Boğaziçi University Math. Dept. Colloquium talk: ‘Small gaps between primes’, June 7, 2005.
- Mathematisches Institut, Georg-August-Universität Göttingen, Germany; ‘Gauss-Dirichlet Conference’; Invited speaker. Title of talk: ‘Small gaps between primes’, June 21, 2005.
- 16th International Conference of Jangjeon Mathematical Society held at Akdeniz University, Antalya, Turkey; Invited speaker. Title of talk: ‘Small gaps between primes’, July 4, 2005.
- Workshop on ‘Gaps between primes’ held at the American Institute of Mathematics, Palo Alto CA, U.S.A.; Invited speaker, Nov. 28 - Dec. 2, 2005.
- Conference on Number Theory and Dynamical Systems held at Forschungsinstitut für Mathematik, ETH Zürich, Switzerland; Invited speaker. Title of talk: ‘Small gaps between primes’, Jan. 23-25, 2006.
- Instituto de Matemáticas UNAM, Campus Morelia, Mexico; Title of talk: ‘Recent results on small gaps between primes’, Sept. 13, 2006
- METU Math. Dept. General Seminar talk on the occasion of receiving the M. Gündüz İkedâ Research Award. Title of talk: ‘Small Gaps between primes’, May 31, 2007.
- Feza Gürsey Institute, İstanbul, Members’ Presentation; Title of talk: ‘On small distances between ordinates of zeros of  $\zeta(s)$  and  $\zeta'(s)$ ’, June 6, 2007.
- 6th International ISAAC (International Society for Analysis, its Applications and Computation) Congress held at METU, Ankara, Turkey; Aug. 13-18, 2007; Invited Speaker, Title of talk: ‘Recent results on small gaps between primes’,
- XX National Mathematics Symposium of Turkey held at Atatürk University, Erzurum; Invited talk: ‘The existence of small gaps between primes’, Sept. 3-6, 2007.



- Mathematisches Forschungsinstitut Oberwolfach, Germany; ‘Analytic Number Theory’ workshop talk: ‘Relations between zeros of  $\zeta(s)$  and  $\zeta'(s)$ ’, Mar. 11, 2008.
- Academy of Sciences and Arts of Bosnia and Hercegovina, Sarajevo, Invited Talk: ‘Small gaps between primes’, June 14, 2008.
- 4th Croatian Mathematical Congress held at University of Osijek, Croatia; June 17-20, 2008; Plenary lecture: ‘Recent results on small gaps between primes’.
- University of Sarajevo, Invited talk: ‘A brief history of the prime numbers’, June 25, 2008.
- Institute for Advanced Study, Princeton, Members Seminar talk: ‘Small gaps between primes, and between almost primes’, Nov. 19, 2009.
- METU Math. Dept. Algebra and Number Theory Symposium; Invited talk: ‘Small gaps between primes, and between almost primes’, Oct. 14, 2010.
- Paul Turán Memorial Conference at Alfréd Rényi Institute of Mathematics, Budapest, Hungary; Invited talk: ‘Density of small gaps between primes’, Aug. 25, 2011.
- 3rd Montreal-Toronto Workshop in Number Theory at Fields Institute, University of Toronto; Invited talk: ‘Correlations of zeta zeros with some sequences’, Oct. 8, 2011.
- Istanbul Number Theory Meetings, Istanbul Mathematical Sciences Centre (IMBM), Boğaziçi University; Seminar talk: ‘A survey of recent results on small gaps between primes’, Apr. 14, 2012.
- 2012 Conference on  $L$ -functions, Jeju, South Korea; Invited talk: ‘A survey of results on small gaps between primes’, Aug. 21, 2012.
- XXV National Mathematics Symposium of Turkey held at Niğde University; Invited talk: ‘Ardışık asallar’, Sept. 6, 2012.
- 2nd International Eurasian Conference on Mathematical Sciences and Applications at International University of Sarajevo, Bosnia-Herzegovina; Invited talk: ‘Small gaps between primes’, Aug. 27, 2013.
- EMS Presidents Meeting, Istanbul Mathematical Sciences Centre (IMBM), Boğaziçi University; Seminar talk: ‘Developments in the last decade about small gaps between primes’, Apr. 12, 2014.
- METU Math. Dept. General Seminar talk: ‘Small gaps between primes: The GPY method and recent developments’, Apr. 17, 2014.

- International Conference on Algebra and Number Theory in Samsun, Turkey; Invited talk: ‘Small gaps between primes: The GPY method and recent developments’, Aug. 5, 2014.
- ICM 2014, The International Congress of Mathematicians, Seoul, South Korea; Invited talk (together with D. A. Goldston and J. Pintz): ‘Small gaps between primes’, Aug. 15, 2014.
- Caucasian Mathematical Conference I, Tbilisi, Georgia; Invited talk: ‘Small gaps between primes: The GPY method and recent advancements over it’, Sept. 5, 2014.
- 5-th Annual Conference of the Georgian Mathematical Union, Batumi, Georgia; Invited talk: ‘Correlations of zeta zeros with some sequences’, Sept. 9, 2014.
- Workshop on Bounded Gaps between Primes, American Institute of Mathematics, Palo Alto CA, USA; Invited participant, Nov. 17-21, 2014.
- UNCG Summer School in Computational Number Theory 2015, Zeta functions - New Theory and computations, The University of North Carolina, Greensboro Nc, USA; Invited lecturer; Talk titles: ‘Small gaps between primes: The GPY method and recent advancements over it’ and ‘Correlations of zeta zeros with some sequences’, May 19 - 21, 2015.
- Caucasian Mathematics Conference III, Southern Federal University, Rostov-on-Don, Russia; Plenary talk: ‘The distribution of primes’, Aug. 28, 2019.
- Turkish Mathematical Association meeting, İstanbul, Turkey; Tosun Terzioğlu Memorial Talk: ‘The distribution of primes’, Sept. 27, 2019.
- Number Theory Conference 2020 in honour of K. Györy, J. Pintz, A. Sarközy, University of Debrecen, Hungary; Plenary talk: ‘Correlations of zeta zeros with some sequences’, July 4, 2022.

## SCHOLARLY PUBLICATIONS

### Ph.D. Dissertation

“Zeta-function theory: Pair correlation and value distribution”, Department of Mathematics, University of Toronto, 1990. Thesis supervisor: Professor John B. Friedlander.

### Edited book

“Number Theory and its Applications, Proceedings of a summer school at Bilkent University 1996”, (co-editor S.A. Stepanov); 360 pages, 13 articles by 13 authors; Marcel Dekker, New York, 1999. (MR 1661687).

### Articles in refereed journals and proceedings

- “The mean value of  $|\zeta(1/2 + it)|^2$  at the zeros of  $Z^{(k)}(t)$ ”, *C. R. Math. Rep. Acad. Sci. Canada*, **XII** (1990), no. 4, 135-140; (MR 1070425).
- “A sum over the zeros of partial sums of  $e^x$ ”, *J. Ramanujan Math. Soc.*, **6** (1991), no. 1-2, 51-66; (MR 1132346).
- “The pair correlation of zeros of Dirichlet L-functions and primes in arithmetic progressions”, *Manuscripta Mathematica*, **72** (1991), no. 3, 325-334; (MR 1118550).
- “On the zeros of the sections of the exponential function”, *Turk. J. Math.*, **16** (1992), no. 3, 177-182; (MR 1202971).
- “On the tails of the exponential series”, *Canadian Math. Bull.*, **37** (1994), no. 2, 278-286; (MR 1275716).
- “A note on  $\zeta''(s)$  and  $\zeta'''(s)$ ”, *Proc. Amer. Math. Soc.*, **124** (1996), no. 8, 2311-2314; (MR 1371146).
- “Zeros of derivatives of Dirichlet L-functions”, *Turk. J. Math.*, **20** (1996), no. 4, 521-534; (MR 1432879).
- (with D.A. Goldston) “Primes in short segments of arithmetic progressions”, *Canadian J. Math.*, **50** (1998), no. 3, 563-580; (MR 1629827).
- “A survey of results on primes in short intervals” in Number Theory and its Applications, Proc. of a summer school at Bilkent University 1996 (ed.s C.Y. Yildirim and S.A. Stepanov), pp. 307-343, Marcel Dekker, New York, 1999; (MR 1661672).
- “Zeros of  $\zeta''(s)$  and  $\zeta'''(s)$  in  $\sigma < \frac{1}{2}$ ”, *Turk. J. Math.*, **24** (2000), no.1, 89-108; (MR 1792247).
- (with D.A. Goldston) “On the second moment for primes in an arithmetic progression”, *Acta Arithmetica*, **100** (2001), no. 1, 85-104; (MR 1864629).
- “The Riemann zeta-function and the distribution of primes”, in Proc. 2002 International Conference on subjects related to Clay problems (Chonbuk National University, Jeonju, South Korea), 2002, 37-94.
- (with D.A. Goldston) “Higher correlations of divisor sums related to primes I: Triple correlations”, *Integers*, **3** (2003), A5, (66 pp.); (MR 1985667).
- (with D.A. Goldston, Y. Motohashi and J. Pintz) “Small gaps between primes exist”, *Proc. Japan Acad.* **82** (2006), no. 4, 61-65; (MR 2222213).

- (with D.A. Goldston and J. Pintz) “Primes in Tuples III: On the difference  $p_{n+\nu} - p_n$ ” *Funct. Approx. Comment. Math.* **35** (2006), 79-89; (MR 2271608).
- (with D.A. Goldston) “Higher correlations of divisor sums related to primes II: Variations of the error term in the prime number theorem”, *Proc. London Math. Soc. (3)*, **95** (2007), no. 1, 199-247; (MR 2329552).
- (with D.A. Goldston) “Higher correlations of divisor sums related to primes III: Small gaps between primes”, *Proc. London Math. Soc. (3)*, **95** (2007), no. 3, 653-686; (MR 2368279).
- (with D.A. Goldston and J. Pintz) “The path to recent progress on small gaps between primes”, in *Analytic Number Theory, A tribute to Gauss and Dirichlet Clay Math. Proc.* **7** (2007), 129-139; (MR 2362197).
- (with M.Z. Garaev) “On small distances between ordinates of zeros of  $\zeta(s)$  and  $\zeta'(s)$ ”, *Int. Mat. Res. Not.* **2007**, no. 21, 14 pp.; (MR 2352220).
- (with D.A. Goldston and J. Pintz) “Primes in Tuples I”, *Annals of Math. (2)*, 2nd Ser., **170** (2009), no.2, 819-862; (MR 2552109).
- (with D.A. Goldston S.W. Graham and J. Pintz) “Small gaps between primes or almost primes”, *Trans. Amer. Math. Soc.*, **361** (2009), no. 10, 5285-5330; (MR 2515812).
- (with D.A. Goldston S.W. Graham and J. Pintz) “Small gaps between product of two primes”, *Proc. London Math. Soc. (3)*, **98** (2009), no. 3, 741-774; (MR 2500871); “Corrigendum”, *ibid.*, **106** (2013), no. 2, 477-480; (MR 3021469).
- “The distribution of primes: Conjectures vs. hitherto provables”, pp. 75-108 of *Further Progress in Analysis*, Proc. of the 6th International ISAAC Congress held at METU, Ankara 2007 (ed.s H. G. W. Begehr, A. O. Çelebi, R. P. Gilbert), World Scientific, Singapore, 2009; (MR 2581614).
- (with D.A. Goldston and J. Pintz) “Primes in Tuples II”, *Acta Mathematica* **204** (2010), no. 1, 1-47; (MR 2600432).
- (with D.A. Goldston S.W. Graham and J. Pintz) “Small gaps between almost primes, the parity problem and some conjectures of Erdős on consecutive integers”, *Int. Mat. Res. Not.* **2011**, no. 7, 1439-1450; (MR 2806510).
- (with Y. Karabulut) “On some averages at the zeros of the derivatives of the Riemann zeta-function”, *J. Number Theory*, **131** (2011), no. 10, 1939-1961; (MR 2811560).

- (with D.A. Goldston and J. Pintz) “Positive proportion of small gaps between consecutive primes”, *Publ. Math. Debrecen*, **79/3-4** (2011), 433-444; (MR 2907978).
- (with D.A. Kaptan and Y. Karabulut) “Some mean value theorems for the Riemann zeta-function and Dirichlet  $L$ -functions”, *Comment. Math. Univ. St. Pauli*, **60**, no. 1-2 (2011), 83-87; (MR 2951925).
- (with D.A. Goldston and J. Pintz) “Primes in Tuples IV”, *Acta Arithmetica* **160** (2013), no. 1, 37-53; (MR3085151).
- (with D.A. Goldston and J. Pintz) “Small gaps between primes”, Proc. of the ICM 2014 held at Seoul, South Korea; pp. 419-441 of the Invited Lectures volume, 2014.
- (with Y. Karabulut) “Some analogues of pair correlation of zeta zeros”, pp. 113-179 of Exploring the Riemann the Zeta Function (editors: H. Montgomery, A. Nikeghbali, M. Th. Rassias), Springer, 2017.
- (with K. Benli and E. Elma) “Mean values of the functional equation factors at the zeros of derivatives of the Riemann zeta-function and Dirichlet  $L$ -functions”, pp. 59-67 of Analytic Number Theory, Modular Forms and  $q$ -Hypergeometric Series (editors: G. E. Andrews, F. Garvan), Springer, 2018.
- (with A. Boysal and F. Ecevit) “A lattice sum involving the cosine function”, *J. Math. Anal. Appl.* **463** (2018), no. 1, 134-160.
- (with D.A. Goldston, S.W. Graham, A. Panidapu, J. Pintz and J. Schettler) “Small gaps between almost primes, the parity problem, and some conjectures of Erdős on consecutive integers II”, *J. Number Theory*, **221** (2021), 222-231.
- (with A. Boysal and F. Ecevit) “Asymptotic evaluation of a lattice sum associated with the Laplacian matrix”, *Analysis Math.* (2022) DOI: 10.1007/s10476-022-0167-1

Most of my publications can be reached from the webpage:

<http://www.math.boun.edu.tr/instructors/yildirim/yildirim.htm>

### Reviews

104 reviews for *Mathematical Reviews*, and 73 reviews for *Zentralblatt für Mathematik*.

### Articles in non-refereed or general journals

- “Matematikte saçmalık ?” (Nonsense in mathematics ?) Jan. 97 issue of the Turkish art quarterly *Föl*, pp. 47-49.

- Review of A. Doxiadis's book 'Uncle Petros and Goldbach's conjecture' in the literary journal *Virgöl* (Mar. 2001), pp. 54-57. (re-published with a few changes in the popular math journal *Matematik Dünyası*, (Summer 2003), pp. 72-76.
- "Elementer bir limit" (An elementary limit) *Matematik Dünyası*, **107** (2019), 14-17.
- "Riemann zeta-fonksiyonu" *Matematik Dünyası*, **110** (2021), 33-37.