Prof. Dr. Ahmet TEKCAN

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1) PERSONAL INFORMATION:

Birth date: 17 November 1977. Kayseri - TÜRKİYE

2) EDUCATIONS:

1. **First School:** (1983 – 1988) Zeki Doğan First School-Kayseri
2. **Middle School:** (1988-1991) Dedeman Middle School-Kayseri
3. **College:** (1991-1994) Kayseri College-Kayseri
4. **BSc:** (1994-1998) Uludag University, Faculty of Science, Department of Mathematics-Bursa
5. **MSc:** (1998-2000) Uludag University, Institute of Science, Department of Mathematics- Bursa
6. **PhD:** (200-2004) Uludag University, Institute of Science, Department of Mathematics- Bursa

3) ACADEMIC PROMOTIONS:

1. **Researcher Assistant** (1998-2004) Uludag University, Faculty of Science, Department of Mathematics-Bursa
2. **Researcher Assistant Doctor** (2004-2008) Uludag University, Faculty of Science, Department of Mathematics-Bursa
3. **Assist. Prof. Dr.** (2008-2009) Uludag University, Faculty of Science, Department of Mathematics-Bursa
4. **Assoc. Prof. Dr.** (2009-) Uludag University, Faculty of Science, Department of Mathematics-Bursa

4) THESIS COMPLETED:

1. **MSc:** *Covering spaces and the transformation groups of the covering spaces*. Uludag University, Institute of Science, Department of Mathematics, Bursa, 2000.
2. **PhD:** *Discrete groups and quadratic forms*. Uludag University, Institute of Science, Department of Mathematics, Bursa, 2004.

5) RESEARCH AREAS:

Combinatorics, analytic number theory, covering spaces, discrete groups, binary quadratic forms, ternary forms, Hermityan forms, quadratic ideals, elliptic curves, elliptic divisibility sequence, Pell and Diophantine equations, numbers, integer sequences, congruence and conics.

6) STUDENTS:

1. **Hatice Alkan (MSc)** *Quadratic Forms and Diophantine Equations*. (2009-2011)
2. **Merve Engür (MSc)** *Quadratic Forms and Integer Sequences*. (2010-)

3. **Meltem Esra Özbek (MSc)** (2011-)
4. **Arzu Özkoç (PhD)** *Some Specific Diophantine Equations and Integer Sequences*. (2009-)

7) ACADEMIC:

A) Publications:

1) A.Tekcan, M.Bayraktar, O.Bizim. *On the Covering Space and the Automorphism Group of the Covering Space*. Balkan Jour.of Geom. and its App.8(1) (2003), 101-108.

2) A.Tekcan, O.Bizim. *The Connection between Quadratic Forms and the Extended Modular Group*. Mathematica Bohemica 128(3) (2003), 225-236.

3) A.Tekcan, O.Bizim. *On the Number of Representations of Positive Integers by Quadratic Forms as the Basis of the Space $S_{4}(\Gamma_{0}(47),1) $*. International Journal of Mathematics and Mathematical Science 2004(12) (2004), 637-646.

4) A.Tekcan, O.Bizim. *On the Representation of Positive Integers by Quadratic Forms with Seven Variables*. Southeast Asian Bulletin of Mathematics 28 (5) (2004), 875-886.

5) A.Tekcan. *Representations of Positive Integers by a Direct Sum of Quadratic Forms*. Results in Mathematics 46(2004), 146-163.

6) A.Tekcan. *Pell Equation $x^{2}-Dy^{2}=2$, II*. Irish Mathematical Society Bulletin 54(2004), 73-89.

7) A.Tekcan. *Formulas for the Fourier Coefficients of Cusp Form for Some Quadratic Forms*. Turkish Journal of Mathematics 29(2005), 141-156.

8) A.Tekcan. *Representation of Integers by Hermitian Forms*. Acta Mathematica Universitatis Comenianae LXXIV(2) (2005), 205-209.

9) A.Tekcan. *Cycles of Indefinite Quadratic Forms and Cycles of Ideals*. Hacettepe Journal of Maths.and Statistics 35(1) (2006), 63-70.

10) A.Tekcan, O.Bizim, M.Bayraktar. *Solving the Pell Equation using the Fundamental Element of the Field $\mathbb{Q}(\sqrt{\Delta })$*. Southeast Asian Bulletin of Mathematics 30(2)(2006), 355-366.

11) A.Tekcan. *Signatures of the Special Congruence Subgroup of the Extended Modular Group*. Southeast Asian Bull. of Maths 30(6) (2006), 1147-1156.

12) A.Tekcan, H.Özden. *On the Quadratic Irrationals, Quadratic Ideals and Indefinite Quadratic Forms*. Irish Mathematical Society Bulletin 58(2006), 69-79.

13) A.Tekcan, O.Bizim, I.N.Cangül. *The Number of Representations of Positive Integers by Positive Quadratic Forms*. Proc. of the Jang. Math. Soc. 9(2) (2006), 125-136.

14) A.Tekcan. *A Second Approach to the Proper Cycles of Indefinite Quadratic Forms and their Right Neighbors*. Int. J. of Contemporary Math. Sci. 2(6) (2007), 249-260.

15) A.Tekcan. *The Pell Equation $x^{2}-Dy^{2}=\pm 4$*. Applied Mathematical Sciences 1(8) (2007), 363-369.

16) A.Tekcan. *Representations of Positive Integers by Positive Quadratic Forms and the Fourier Coefficients of Cusp Forms*. Sout As. Bull. of Maths 31(2)(2007), 349-362.

17) A.Tekcan. *The Number of Rational Points on Conics $C_{p,k}:x^{2}-ky^{2}=1$ over Finite Fields $\mathbb{F}_{p}$*. Int. J. of C.and Math.Sc.1(2) (2007), 150-153.

18) A.Tekcan. *The Elliptic Curves $y^{2}=x^{3}-t^{2}x$ over $\mathbb{F}_{p}$*. Int. Jour. of Comp. and Math. Sci. 1(3)(2007), 165-171.

19) B.Gezer, H.Özden, A.Tekcan, O.Bizim. *The Number of Rational Points on Elliptic Curves $y^{2}=x^{3}+b^{2}$ over Finite Fields*. Int. Jour. of Comp. and Math. Sci. 1(3) (2007), 178-184.

20) A.Tekcan. *On Indefinite Binary Quadratic Forms, Cubic Congruence and Elliptic Curves*. Int. Jour. of Comp. and Math. Sci. 2(21)(2007), 1031-1037.

21) A.Tekcan, B.Gezer, O.Bizim. *On the Integer Solutions of the Pell Equation $x^{2}-dy^{2} =2^{t}$*. Int. Jour. of Comp. and Math. Sci. 1(3)(2007), 204-208.

22) A.Tekcan. *Some Algebraic Properties of Universal and Regular Covering Spaces*. Int. Jour. of Comp.and Math.Sci. 1(4)(2007), 251-254.

23) A.Tekcan. ***Some Remarks on Indefinite Binary Quadratic Forms and Quadratic Ideals*****.** **Hacettepe Journal of Math.and Statistics 36(1)(2007), 27-36. (SCI-Exp)**

24) A.Tekcan. *On the Pell Equation $x^{2}-(k^{2}-2)y^{2}=2^{t}$*. Crux Mathematicorum with Math. Mayhem 33(6)(2007), 361-365.

25) A.Tekcan. ***Proper Cycle of Indefinite Quadratic Forms and their Right Neighbors*****.** **Applications of Mathematics 52(5) (2007), 407-415. (SCI-Exp)**

26) A.Tekcan. ***The Cubic Congruence $x^{3}+ax^{2}+bx+c \equiv 0 (\mod p)$ and Binary Quadratic Forms F(x,y)=ax^{2}+bxy+cy^{2}$*****.** **Ars Combinatoria 85(2007), 257-269. (SCI-Exp)**

27) A.Tekcan, B. Gezer, O. Bizim. *Some Relations on Lucas Numbers and their Sums*. Ad. Studies in Cont. Mathematics 15(2)(2007), 195-211.

28) A.Tekcan. ***The Base Points of Indefinite Quadratic Forms in the Cycle and Proper Cycle of an Indefinite Quadratic Form*****.** **Hacettepe Journal of Maths and Statistics 36(2)(2007), 101-114. (SCI-Exp)**

29) A.Tekcan. *The Pell Equation $x^{2}-(k^{2}-k)y^{2}=2^{t}$*. Int. Journal of Comp.and Math.Sci. 2(1)(2008), 5-9.

30) B.Gezer, A.Tekcan, O.Bizim. *The Number of Rational Points on Elliptic Curves and Circles over Finite Fields*. Int. J.of Comp.and Math.Sci. 2(2)(2008), 58-63.

31) A.Tekcan. *On Indefinite Binary Quadratic Forms and Quadratic Ideals*. Novi Sad Journal of Mathematics 38(1)(2008), 83-96.

32) A.Tekcan, A.Özkoç, B.Gezer, O.Bizim. *Some Relations Involving the Sums of Fibonacci Numbers*. Proceedings of the Jangjeon Math. Soc. 11(1) (2008), 1-12.

33) A.Tekcan, O.Bizim. *The Pell Equation $x^{2}+xy-ky^{2}=\pm1$*. Global Journal of Pure and Applied Mathematics 4(2)(2008), 105-112.

34) A.Tekcan. *On the Cycles of Indefinite Quadratic Forms and Cycles of Ideals III*. Comptes rendus mathématiques-Mathematical Reports 30(1)(2008), 22-32.

35) A.Tekcan, A.Özkoç, B.Gezer, O.Bizim. *Elliptic Curves, Conics and Cubic Congruencies associated with Indefinite Binary Quadratic Forms*. Novi Sad Journal of Mathematics 38(2) (2008), 71-81

36) A.Tekcan. *The Number of Rational Points on Singular Curves $y^{2}=x(x-a)^{2}$ over Finite Fields $\mathbb{F}_{p}$*. Int. J.of Comp.and Math.Sci. 3(1)(2009), 14-17.

37) A.Tekcan, A.Özkoç. *Quadratic Irrationals, Quadratic Ideals and Indefinite Quadratic Forms II*. Int. Journal of Comp.and Math.Sci. 3(2)(2009), 56-59.

38) A.Tekcan. *Representation of Integers by Quadratic Forms in Several Variables*. Creative Mathematics and Informatics 18(2009), 65-75.

39) A.Tekcan, A.Özkoç. *Positive Definite Binary Quadratic Forms, Quadratic Congruences and Singular Curves*. Comptes ren.math.-Math.Reports 31(2)(2009), 53-64

40) A.Tekcan. *The Elliptic Curves $y^{2}=x^{3}-1728x$ over Finite Fields*. Journal of Algebra, Number Theory: Advances and Applications 1(1)(2009), 61-74.

41) A.Tekcan, A.Özkoç, H.Alkan. *The Diophantine Equation $y^{2}-2yx-3=0$ and Corresponding Curves over $\mathbb{F}_{p}$*. Int. Jour. of Comp.and Math.Sci 3(6)(2009), 260-263.

42) B.Gezer, A.Tekcan, O.Bizim. *Elliptic Divisibility Sequences over Finite Fields*. Int. Journal of Comp.and Math.Sci. 4(1)(2010), 12-19.

43) A.Tekcan, A.Özkoç. ***The Diophantine Equation $x^{2}-(t^{2}+t)y^{2}-(4t+2)x +(4t^{2}+4t)y=0$*****.** **Revista Matemática Comp. 23(1)(2010), 251-260. (SCI-Exp)**

44) A.Tekcan, A.Özkoç, C.Kocapınar, H.Alkan. *The Diophantine Equation $x^{2}-Py^{2}=Q$*. Int. Jour. of Comp.and Math.Sci. 4(2)(2010), 59-62.

45) A.Tekcan. *On the Cycles of Indefinite Quadratic Forms and Cycles of Ideals II*. Southeast Asian Bull. of Maths 34(2010), 185-192.

46) 46. A.Tekcan. *Positive Definite Quadratic Forms, Elliptic Curves and Cubic Congruences*. Int. Jour. of Comp.and Math.Sci. 4(2)(2010), 100-104.

47) A.Tekcan. *The Cubic Congruence $x^{3}+ax^{2}+bx+c \equiv 0 (\mod p)$ and Binary Quadratic Forms F(x,y)=ax^{2}+bxy+cy^{2}$ II*. Acta Universitatis Apulensis 22(2010), 53-63.

48) A.Özkoç, A.Tekcan. *Quadratic Diophantine Equation $x^{2}-(t^{2}-t)y^{2}-(4t-2)x +(4t^{2}-4t)y=0$*. Bull. of the Malaysian Math. Sci.Soc. 33(2)(2010), 273-280. (SCI-Exp)

49) A.Tekcan, A.Özkoç . *n-Universal Quadratic Forms and Quadratic Forms over Finite Fields*. Irish Math. Society Bulletin 65(2010), 11-21.

50) A.Tekcan, Özkoç, İ.N. Cangül. *Indefinite Quadratic Forms and their Neighbours*. AIP Conf. Proc. CP 1281, Numerical Analysis and Applied Mathematics (2010), 1102-1105. (SCI-Exp)

51) D.Namlı, İ.N.Cangül, A.S.Çevik, A.D.Güngör, A.Tekcan. *Primes in $Z[exp(2\pii/3)]$*. AIP Conf. Proc. CP 1281, Numerical Analysis and Applied Mathematics (2010), 1129-1132. (SCI-Exp)

52) A.Tekcan, A.Özkoç, H.Alkan. *On Cycles and Products of Ideals and Corresponding Indefinite Quadratic Forms*. Comptes ren.math.-Math.Reports 32(2) (2010), 40-51.

53) A.Tekcan, H.Alkan, A.Özkoç, E.Çetin, İ.N.Cangul. *Rational Points on Curves over Finite Fields*. Antarctica Journal of Mathematics 7(4)(2010), 431-437.

54) A.Tekcan, A.Özkoç. *The Family of Indefinite Binary Quadratic Forms and elliptic Curves over Finite Fields*. General Mathematics 18(4)(2010), 3-17.

55) A.Tekcan. *Neighbors of Indefinite Binary Quadratic Forms*. Int. Jour. of Comp. and Math. Sci. 5(1)(2011), 16-22.

56) A.Tekcan, A.Özkoç, E.Çetin, H.Alkan, İ.N.CAngül. *Quadratic Forms, Elliptic Curves and Integer Sequence*. Acta Universitatis Apulensis 25(2011), 9-30.

57) A.Tekcan. *The Elliptic Curves $y^{2}=x(x-1)(x-\lambda)$*. Ars Combinatoria (99) (2011), 519-529. (SCI-Exp)

58) A.Tekcan, A.Özkoç. *$n-$Universal Quadratic Forms, Quadratic Ideals and Elliptic Curves over Finite Fields*. Math. Reports 13(2)(2011), 205-216. (SCI-Exp)

59) A.Tekcan. *Some Algebraic Identities on the Integer Sequence Associated with Imaginary Quadratic Number Field $|mathbb{Q}(\sqrt{-163})$*. Selçuk Journal of Applied Mathematics 12(1)(2011),149-160.

60) A.Özkoç A.Tekcan. *Integer Solutions of a Special Diophantine Equation*. AIP Conf. Proc. CP 1389, Numerical Analysis and Applied Mathematics, 1389(2011), 371-374. (SCI-Exp)

61) A.Tekcan. *The Number of Solutions of Pell Equations$x{2}-ky{2}=N$ and $x{2}+xy-ky{2}=N over $\mathbb{F}_{p}$*. Ars Comb.102(2011), 225-236. (SCI-Exp)

62) A.Özkoç, A.Tekcan, İ.N.Cangül. *Solving Some Parametric Quadratic Diophantine Equation over $\mathbb{Z}$ and $\mathbb{F}_{p}$*. Applied Maths. and Computation 218(2011), 703-706. (SCI)

63) A.Tekcan. *Continued Fraction Expansion of $\sqrt{D}$ and Pell Equation $x^{2}-Dy^{2}=1$*. Mathematica Moravica **15-2**(2011), 19-27.

64) A.Tekcan. *On Kaprekar Numbers*. Advances in Theoretical and App. Maths. **7**(1) (2012), 43-50.

65) A.Tekcan, O. Bizim. *Elliptic Curves and Cubic Congruences Associated with Indefinite Binary Quadratic Forms*. Global Journal of Pure and Applied Mathematics.

66) A.Tekcan, A.Özkoç, B.Gezer, O.Bizim. *Representations of Positive Integers by Positive Quadratic Forms*. Southeast Asian Bull. of Maths

67) A.Tekcan. *Some Algebraic Identities on Pell Numbers and Sums of Pell Numbers*. Ars Combinatoria. (SCI-Exp)

68) A.Tekcan. *Principal Indefinite Quadratic Forms and Singular Curves over Finite Fields*. Southeast Asian Bull. of Maths

69) C.Kocapınar, A.Özkoç, A.Tekcan. *The Integer Sequence $B=B_{n}(P,Q)$ with Parameters P and Q*. Ars Combinatoria. (SCI-Exp)

70) A.Tekcan. *Positive Definite Binary Quadratic Forms and Modules over a Field*. Southeast Asian Bull. of Maths

B) Symposium Attended:

B1) National:

71) A.Tekcan. *Quadratic Forms and Ideals*. XVII. National Mathematics Symposium, Abant İzzet Baysal University, 23-26 August 2004, Bolu.

72) A.Tekcan. *Base Points of Positive Definite Quadratic Forms*. XVIII National Mathematics Symposium, İstanbul Kültür University, 5-8 September 2005, İstanbul.

73) A.Tekcan, O.Bizim, H.Özden, İ.İnam. *Cycles of Indefinite Quadratic Forms*. XIX. National Mathematics Symposium, Dumlupınar University, 22-25 August 2006, Kütahya.

74) H.Özden, İ.İnam, A.Tekcan, O.Bizim. *The Number of Rational Points on Elliptic Curves $y^{2}=x^{3}+b^{2}$ over Finite Fields*. XIX. National Mathematics Symposium, Dumlupınar University, 22-25 August 2006, Kütahya.

75) İ.İnam, O.Bizim, A.Tekcan, H.Özden. *The Rational Points on Frey Elliptic Curves over Finite Fields*. XIX. National Mathematics Symposium, Dumlupınar University, 22-25 August 2006, Kütahya.

76) A.Tekcan, A.Özkoç. *Right and Left Neighbors of Indefinite Binary Quadratic Forms*. XXII. National Mathematics Symposium, Nesin Mathematics Willage, 31 August-3 September 2009, Selçuk-İzmir.

77) A.Özkoç, A.Tekcan, *Indefinite Binary Quadratic Forms, Elliptic Curves and Cubic Congruences*. XXII. National Mathematics Symposium, Nesin Mathematics Willage, 31 August-3 September 2009, Selçuk-İzmir.

78) A.Tekcan, A.Özkoç. *Equivalence of Indefinite Quadratic Forms, Base Points and Neighbours*. 5 th Ankara Mathematics Days, 3-4 June 2010, TOBB University, Ankara.

79) A.Özkoç, A.Tekcan. *The Diophantine Equation $x^{2}-(t^{2}-t)y^{2}-(4t-2)x+(4t^{2}-4t)y=0$*. 5 th Ankara Mathematics Days, 3-4 June 2010, TOBB University, Ankara.

80) A.Özkoç, A.Tekcan, C.Kocapınar. *Some Algebraic Identities on the Integer Sequence $C=C_{n}$ with Parameters P and Q*. XXIII. National Mathematics Symposium, 4-7 August 2010, Erciyes University, Kayseri.

B2) International:

81) A.Tekcan, B.Gezer, O.Bizim. *The Connection between Principal Indefinite Quadratic Forms and Elliptic Curves*. Antalya Algebra Days IX, 22-27 May 2007, Antalya-TURKIYE.

82) B.Gezer, O.Bizim, A.Tekcan. *On the Singular Elliptic Curves over Finite Fields*. Antalya Algebra Days IX, 22-27 May 2007, Antalya-TURKIYE.

83) A.Tekcan, B.Gezer, O.Bizim. *Right Neighbors and Base Points of Indefinite Binary Quadratic Forms*. Workshop on Math. Methods in App. Sci. 22-23 May 2008, Bursa-TURKIYE.

84) B.Gezer, O.Bizim, A.Tekcan. *Some Properties of the Elliptic Divisibility Sequences over Finite Fields*. Workshop on Math. Methods in App. Sci. 22-23 May 2008, Bursa-TURKIYE.

85) A.Tekcan, A.Özkoç. *The Number of Rational Points on Elliptic Curves Related to Binary Quadratic Forms*. Antalya Algebra Days X, 28 May-01 June 2008, Antalya-TURKIYE.

86) B.Gezer, A.Özkoç, A.Tekcan, O. Bizim. *The Relationship among Elliptic Divisibility Sequences, Elliptic Curves and Binary Quadratic Forms*. Antalya Algebra Days X, 28 May-01 June 2008, Antalya-TURKIYE.

87) B.Gezer, O.Bizim, A.Tekcan. *On the Elliptic Divisibility Sequences over Finite Fields*. 5-th Europan Congress of Mathematics, 14-18 July 2008, Amsterdam-THE NETHERLAND.

88) A.Özkoç, A.Tekcan, I.N.Cangül.*On the Integer Solutions of Diophantine Equation*. Int.Congress in Honour of Prof.H.M.Srivastava on his 70 th Birth Anniversary, Uludag University, 18-21 August, 2010, Bursa, TURKIYE.

89) A.Tekcan, A.Özkoç, İ.N.CAngül. *Indefinite Quadratic Forms and their Neighbours*. Int. Conf. on Numerical Analysis and App. Maths ICNAAM 2010, 19-25 September 2010, Rhodes-GREECE.

90) D.Namlı, İ.N.Cangül, A.Sinan Çevik, A.Dilek Güngör, A.Tekcan. *Primes in $\mathbb{Z}[exp(2\pii/3)]$*. Int. Conf. on Numerical Analysis and App. Maths ICNAAM 2010, 19-25 September 2010, Rhodes-GREECE.

91) A.Özkoç, A.Tekcan, M.Engür. *Some Properties of Universal Binary Quadratic Forms*. The 24th Int. Conf. of Jangjeon Math. Soc. ICJMS 2011, 20-23 July 2011, Konya-TURKIYE.

92) A.Özkoç, A.Tekcan. *Integer Solutions of a Special Diophantine Equation*. Int. Conf. on Numerical Analysis and App. Maths. ICNAAM 2011, 19-25 September 2011, Halkidiki-GREEECE.

C) Books:

93) O.Bizim, A.Tekcan, B.Gezer. *General Mathematics I* (ISBN: 978-605-4118-18-2). Dora Publishing, Bursa, 2009.

94) O.Bizim, A.Tekcan, B.Gezer. *General Mathematics II* (ISBN: 978-605-4118-41-0). Dora Publishing, Bursa, 2009.

95) A.Tekcan. *Advanced Analysis* (ISBN: 978-605-4118-74-8) Dora Publishing, Bursa, 2010.

96) O.Bizim, A.Tekcan, B.Gezer. *General Mathematics* (ISBN: 978-605-4485-09-3) Dora Publishing, Bursa, 2011.