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Publons / Web Of Science ResearcherID: AAZ-5702-2020

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Education Information

Doctorate, Istanbul Technical University, Fen-Edebiyat, Matematik Mühendisliği, Turkey 1989 - 1992

Undergraduate, Atatürk, Fen-Edebiyat, Matematik, Turkey 1982 - 1986

Dissertations

Doctorate, Quantum matrix groups and q-oscillators, Istanbul Technical University, Fen-Edebiyat, Matematik Mühendisliği, 1992

Research Areas

Algebraic Geometry, Geometry, Group Theory and Generalizations

Academic Titles / Tasks

Professor, Yildiz Technical University, Faculty Of Arts & Science, Department Of Mathematics, 2024 - Continues

Associate Professor, Yildiz Technical University, Faculty Of Arts & Science, Department Of Mathematics, 2018 - 2024

Courses

Matematik Analiz II, Undergraduate, 2017 - 2018

Kuantum Süper Gruplar, Postgraduate, 2016 - 2017

Kuantum Diferansiyel Geometri I, Postgraduate, 2016 - 2017

Advising Theses

Çelik S., Z₃-dereceli GL_q(2) kuantum grubun gauss ayrışımı, Postgraduate, Ö.SAVAŞ(Student), 2023

Çelik S., F(R_q(1|1)) üzerine iki parametrelilik bıkovaryant diferansiyel hesaplar, Postgraduate, İ.Temli(Student), 2018

Çelik S., Z3-dereceli $GL_q(2)$ kuantum grubu üzerine diferansiyel hesap, Doctorate, F.Bulut(Student), 2016
 Çelik S., Kuantum süper vektörlerin toplamı ve diferansiyel geometrisi, Postgraduate, İ.Aydın(Student), 2013
 Çelik S., Kuantum vektörlerin toplanması ve diferansiyel geometrisi, Postgraduate, A.Osman(Student), 2012
 Çelik S., $GL_h(1|1)$ kuantum süper grubunun Gauss ayrışımı, Postgraduate, E.Yıldırım(Student), 2011
 Çelik S., Z3- dereceli $R_q(2/1)$ kuantum süper uzayının diferansiyel geometrisi, Postgraduate, B.Cesur(Student), 2010
 Çelik S., $GL_{q,j}(1/1)$ kuantum süper grubunun diferansiyel geometrisi, Doctorate, E.YAŞAR(Student), 2010
 Çelik S., Büzülme yoluyla $GL_h(2|1)$ kuantum süper grubu, Postgraduate, M.Arıkan(Student), 2010
 Çelik S., $IR_3(h)$ uzayı üzerine diferansiyel hesap, Postgraduate, Ö.Öksüz(Student), 2007
 Çelik S., $Rh(2/1)$ süper uzayı üzerine bir diferansiyel hesap, Postgraduate, E.Saltürk(Student), 2007
 Çelik S., Kuantum süper uzay üzerine bir genişletilmiş diferansiyel hesap, Postgraduate, M.İnekci(Student), 2007

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Differential geometry of the quantum supergroup $GLH, H' (1|1)$**
 ÇELİK S., Temli I.
 Reports on Mathematical Physics, vol.93, no.3, pp.371-391, 2024 (SCI-Expanded)
- II. **Recovery and characterization of cellulose microfibrers from fallen leaves and evaluation of their potential as reinforcement agents for production of new biodegradable packaging materials**
 ÇELİK S., Kutlu G., TÖRNÜK F.
 Food Science and Nutrition, 2024 (SCI-Expanded)
- III. **Extended calculus on $O(Ch(1,1))$**
 Çelik S.
 TURKISH JOURNAL OF MATHEMATICS, vol.47, pp.1674-1693, 2023 (SCI-Expanded)
- IV. **Right-Covariant Differential Calculus on Hopf Superalgebra $F(Cq2|1)$**
 ÇELİK S.
 Advances in Applied Clifford Algebras, vol.33, no.3, 2023 (SCI-Expanded)
- V. **GAUSS DECOMPOSITION AND NONSTANDARD DEFORMATION OF $GL(1|1)$**
 ÇELİK S.
 Reports on Mathematical Physics, vol.91, no.1, pp.45-55, 2023 (SCI-Expanded)
- VI. **Cartan calculus on the superalgebra (Formula present)**
 Çelik S.
 Mathematical Communications, vol.28, no.2, pp.213-234, 2023 (SCI-Expanded)
- VII. **A NEW QUANTUM SUPERGROUP AND ITS GAUSS DECOMPOSITION**
 Çelik S., Celik S. A.
 REPORTS ON MATHEMATICAL PHYSICS, vol.88, no.2, pp.259-269, 2021 (SCI-Expanded)
- VIII. **Left-covariant differential calculi on (GL) over-tilde(q) (2)**
 ÇELİK S.
 JOURNAL OF MATHEMATICAL PHYSICS, vol.62, no.7, 2021 (SCI-Expanded)
- IX. **On q-and h-deformations of 3d-superspaces**
 Çelik S.
 Turkish Journal of Mathematics, vol.45, no.1, pp.346-359, 2021 (SCI-Expanded)
- X. **Quantum de Rham complex on $A(h)(1 \text{ vertical bar } 2)$**
 Celik S.
 JOURNAL OF ALGEBRA AND ITS APPLICATIONS, vol.19, no.9, 2020 (SCI-Expanded)
- XI. **Hopf algebra structure on superspace $SPq2 \text{ vertical bar } 1$**
 ÇELİK S.
 HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.49, no.2, pp.777-783, 2020 (SCI-Expanded)
- XII. **Covariant differential calculus on $SPh2 \text{ vertical bar } 1$**
 Çelik S., Temli I.
 TURKISH JOURNAL OF MATHEMATICS, vol.43, no.2, pp.916-929, 2019 (SCI-Expanded)

- XIII. **Differential Calculi on $Z(3)$ - Graded Grassmann Plane**
 Çelik S., Çelik S.
 ADVANCES IN APPLIED CLIFFORD ALGEBRAS, vol.27, no.3, pp.2407-2427, 2017 (SCI-Expanded)
- XIV. **A Differential Calculus on Superspace and Related Topics**
 Bulut F., Çelik S.
 ADVANCES IN APPLIED CLIFFORD ALGEBRAS, vol.27, no.2, pp.1019-1030, 2017 (SCI-Expanded)
- XV. **Covariant differential calculi on quantum symplectic superspace $SPq1|2$**
 Çelik S.
 JOURNAL OF MATHEMATICAL PHYSICS, vol.58, no.2, 2017 (SCI-Expanded)
- XVI. **A New $Z(3)$ -Graded Quantum Group**
 ÇELİK S.
 JOURNAL OF LIE THEORY, vol.27, no.2, pp.545-554, 2017 (SCI-Expanded)
- XVII. **Bicovariant differential calculus on the quantum superspace $R-q(1 \text{ vertical bar } 2)$**
 Çelik S.
 JOURNAL OF ALGEBRA AND ITS APPLICATIONS, vol.15, no.9, 2016 (SCI-Expanded)
- XVIII. **A Differential Calculus on $Z(3)$ -Graded Quantum Superspace**
 Çelik S.
 ALGEBRAS AND REPRESENTATION THEORY, vol.19, no.3, pp.713-730, 2016 (SCI-Expanded)
- XIX. **A Differential Calculus on the $Z(3)$ -graded Quantum Group $GL(q)(2)$**
 ÇELİK S., Bulut F.
 ADVANCES IN APPLIED CLIFFORD ALGEBRAS, vol.26, no.1, pp.81-96, 2016 (SCI-Expanded)
- XX. **A Differential Calculus on the (h, j) -Deformed $Z(3)$ -Graded Superplane**
 Çelik S., Çelik S., Çene E.
 ADVANCES IN APPLIED CLIFFORD ALGEBRAS, vol.24, no.3, pp.643-659, 2014 (SCI-Expanded)
- XXI. **Differential geometry of the $Z(3)$ -graded quantum supergroup $GL(q,j)(1 \text{ vertical bar } 1)$**
 ÇELİK S., YAŞAR E.
 JOURNAL OF GEOMETRY AND PHYSICS, vol.61, no.1, pp.260-269, 2011 (SCI-Expanded)
- XXII. **Cartan Calculus on the Quantum Space $R-q(3)$**
 Çelik S., Özkan E. M., Yaşar E.
 TURKISH JOURNAL OF MATHEMATICS, vol.33, no.1, pp.75-83, 2009 (SCI-Expanded)
- XXIII. **The Hopf algebra structure of the $Z(3)$ -graded quantum supergroup $GL(q,j)(1 \text{ vertical bar } 1)$**
 ÇELİK S., YAŞAR E.
 JOURNAL OF MATHEMATICAL PHYSICS, vol.49, no.2, 2008 (SCI-Expanded)
- XXIV. **Cartan calculi on the quantum superplane**
 Çelik S.
 JOURNAL OF MATHEMATICAL PHYSICS, vol.47, 2006 (SCI-Expanded)
- XXV. **Differential geometry of the Lie algebra of the quantum plane**
 ÇELİK S., ÇELİK S.
 CZECHOSLOVAK JOURNAL OF PHYSICS, vol.55, no.4, pp.463-471, 2005 (SCI-Expanded)
- XXVI. **$Z(3)$ -graded differential geometry of the quantum plane**
 ÇELİK S.
 JOURNAL OF PHYSICS A-MATHEMATICAL AND GENERAL, vol.35, no.30, pp.6307-6318, 2002 (SCI-Expanded)
- XXVII. **Differential geometry of the $Z(3)$ -graded quantum superplane**
 ÇELİK S.
 JOURNAL OF PHYSICS A-MATHEMATICAL AND GENERAL, vol.35, no.19, pp.4257-4268, 2002 (SCI-Expanded)
- XXVIII. **Differential geometry of $GL(h)(1 \text{ vertical bar } 1)$**
 ÇELİK S.
 JOURNAL OF MATHEMATICAL PHYSICS, vol.42, no.3, pp.1283-1295, 2001 (SCI-Expanded)
- XXIX. **Differential geometry of $GL(p,q)(1 \text{ vertical bar } 1)$**
 ÇELİK S.
 JOURNAL OF MATHEMATICAL PHYSICS, vol.41, no.10, pp.6976-6994, 2000 (SCI-Expanded)

- XXX. **Differential geometry of the q-plane**
 Çelik S., Çelik S.
 INTERNATIONAL JOURNAL OF MODERN PHYSICS A, vol.15, pp.3237-3243, 2000 (SCI-Expanded)
- XXXI. **Two-parameter differential calculus on the h-superplane**
 ÇELİK S., ÇELİK S.
 JOURNAL OF MATHEMATICAL PHYSICS, vol.40, no.11, pp.5998-6008, 1999 (SCI-Expanded)
- XXXII. **Two-parameter nonstandard deformation of 2×2 matrices**
 Celik S., Celik S.
 JOURNAL OF MATHEMATICAL PHYSICS, vol.40, no.7, pp.3553-3560, 1999 (SCI-Expanded)
- XXXIII. **Two-parametric extension of h-deformation of $Gr(1 \text{ vertical bar } 1)$**
 ÇELİK S., HIZEL E., ÇELİK S.
 JOURNAL OF MATHEMATICAL PHYSICS, vol.40, no.6, pp.3091-3098, 1999 (SCI-Expanded)
- XXXIV. **Hopf algebra structure of $Gr(q)(1 \text{ vertical bar } 1)$ related to $GL(q)(1 \text{ vertical bar } 1)$**
 ÇELİK S.
 JOURNAL OF MATHEMATICAL PHYSICS, vol.40, no.5, pp.2494-2499, 1999 (SCI-Expanded)
- XXXV. **On the differential geometry of $GL(q)(1 \text{ vertical bar } 1)$**
 ÇELİK S., ÇELİK S.
 JOURNAL OF PHYSICS A-MATHEMATICAL AND GENERAL, vol.31, no.48, pp.9685-9694, 1998 (SCI-Expanded)
- XXXVI. **Differential geometry of the q-superplane**
 ÇELİK S.
 JOURNAL OF PHYSICS A-MATHEMATICAL AND GENERAL, vol.31, no.48, pp.9695-9701, 1998 (SCI-Expanded)
- XXXVII. **Comment on the differential calculus on the quantum exterior plane**
 ÇELİK S., ÇELİK S., ARIK M.
 MODERN PHYSICS LETTERS A, vol.13, no.20, pp.1645-1651, 1998 (SCI-Expanded)
- XXXVIII. **Differential calculus on the h-superplane**
 ÇELİK S., ÇELİK S., ARIK M.
 JOURNAL OF MATHEMATICAL PHYSICS, vol.39, no.6, pp.3426-3436, 1998 (SCI-Expanded)
- XXXIX. **Two-parameter differential calculus on the h-exterior plane**
 ÇELİK S., ÇELİK S.
 MODERN PHYSICS LETTERS A, vol.13, no.5, pp.413-418, 1998 (SCI-Expanded)
- XL. **Two-parametric extension of h-deformation of $GL(1/1)$**
 Celik S.
 LETTERS IN MATHEMATICAL PHYSICS, vol.42, no.4, pp.299-308, 1997 (SCI-Expanded)
- XLI. **The Hopf algebra structure of $GL(1, H-q)$ and the isomorphism between $SPq(1)$ and $SUq(2)$**
 Celik S.
 LETTERS IN MATHEMATICAL PHYSICS, vol.42, no.1, pp.27-34, 1997 (SCI-Expanded)
- XLII. **h-deformation of $Gr(2)$**
 ÇELİK S., HIZEL E.
 JOURNAL OF PHYSICS A-MATHEMATICAL AND GENERAL, vol.30, no.13, pp.4677-4680, 1997 (SCI-Expanded)
- XLIII. **Two parameter deformation of Grassmann matrix group and supergroup**
 ÇELİK S.
 JOURNAL OF MATHEMATICAL PHYSICS, vol.37, no.7, pp.3568-3575, 1996 (SCI-Expanded)
- XLIV. **UNITARY QUANTUM GROUPS, QUANTUM PROJECTIVE SPACES AND Q-OSCILLATORS**
 ARIK M., CELIK S.
 ZEITSCHRIFT FUR PHYSIK C-PARTICLES AND FIELDS, vol.59, no.1, pp.99-103, 1993 (SCI-Expanded)

Articles Published in Other Journals

- I. **On the Z3-Graded Structures**
 Çelik S., Çelik S.

Hagia Sophia Journal of Geometry, vol.5, no.2, pp.31-40, 2023 (Peer-Reviewed Journal)

- II. **Extended Calculi on Z_3 Graded Quantum Superplane**
Çelik S., Özkan E. M.
JP Journal of Geometry and Topology, vol.15, no.2, pp.127-146, 2014 (Scopus)
- III. **Differential geometry of Lie superalgebra of the quantum superplane**
ÇELİK S.
Balkan Phys. Lett., vol.11, pp.119-127, 2003 (Peer-Reviewed Journal)
- IV. **Differential geometry of the q-quaternions**
ÇELİK S.
Balkan Phys Lett, vol.11, pp.91-101, 2003 (Peer-Reviewed Journal)
- V. **Covariant differential calculus on the h-exterior plane**
ÇELİK S.
Balkan Phys. Lett., vol.7, pp.1-10, 1999 (Peer-Reviewed Journal)
- VI. **An h-deformation of $U(\mathfrak{gl}(1/1))$**
ÇELİK S.
Balkan Phys. Lett., vol.6, pp.154-159, 1998 (Peer-Reviewed Journal)
- VII. **On the quantum supergroup $SU_{\{p,q\}}(1/1)$ and quantum oscillators**
ÇELİK S., ÇELİK S.
TURKISH JOURNAL OF PHYSICS, vol.21, pp.1221-1228, 1997 (Scopus)
- VIII. **h-deformation of grassmann supergroup $Gr(1/1)$**
ÇELİK S.
Balkan Phys. Lett., vol.5, pp.149-154, 1997 (Peer-Reviewed Journal)
- IX. **The properties of the quantum supergroup $GL_{\{p,q\}}(1/1)$**
ÇELİK S., ÇELİK S.
Balkan Phys. Lett., vol.1, pp.32-41, 1997 (Peer-Reviewed Journal)
- X. **Quantum properties of dual matrices in $GL_q(1/1)$**
ÇELİK S., ÇELİK S.
Balkan Phys. Lett., vol.3, pp.188-192, 1995 (Peer-Reviewed Journal)
- XI. **On the determination of the relation between the matrix elements of $CP_q(n)$ and covariant q-oscillators**
ÇELİK S.
Turkish Journal Of Mathematics, vol.19, pp.83-89, 1995 (Scopus)
- XII. **Quantum grassmannian manifolds**
ARIK M., AYDIN F., ÇELİK S., HIZEL E.
Balkan Phys. Lett., vol.1, pp.102-106, 1993 (Peer-Reviewed Journal)
- XIII. **The properties of the quantum group $GL_q(3,C)$**
ÇELİK S.
Bull. of the Tech.Univ. of Istanbul, vol.46, pp.459-466, 1993 (Peer-Reviewed Journal)
- XIV. **The quantum group $SU_q(m,1)$ and the quantum coset $SU_q(m,1)/U_q(m-1,1)$**
ÇELİK S.
Balkan Phys. Lett. 1, vol.1, pp.52-58, 1993 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Kısa Teori ve Çözümlü Problemlerle MATEMATİK ANALİZ I**
ÇELİK S., ÇELİK S.
BİRSEN, İstanbul, 2018
- II. **Kısa Teori ve Çözümlü Problemlerle Matematik Analiz II**
ÇELİK S.
Birsen Yayınevi, 2017

- III. **MATEMATİK CİLT II**
CANGÜL İ. N., BAŞARIR M., ÇELİK S., ÇELİK S., COŞKUN E., EKİNCİOĞLU İ.
NOBEL, Ankara, 2017
- IV. **MATEMATİK CİLT II - Calculus Early Transcendentals**
BAŞARIR M., ÇELİK S., ÇELİK S., COŞKUN E., EKİNCİOĞLU İ.
Nobel Akademik Yayıncılık, Ankara, 2017
- V. **Matematik Analiz II**
ÇELİK S., ÇELİK S.
Birsen Yaynevi, 2010
- VI. **Matematik Analiz I**
ÇELİK S., ÇELİK S.
Birsen Yaynevi, İstanbul, 2010
- VII. **Fonksiyonel Analize Giriş**
ÇELİK S.
Yıldız Teknik Üniv. yayınları, 2001
- VIII. **Cümleler Teorisine Giriş ve Soyut Matematik**
ÇELİK S.
Mimar Sinan Üniversitesi, 1997

Refereed Congress / Symposium Publications in Proceedings

- I. **Gauss decomposition of Z_3 -graded quantum group $GL_q(2)$**
SAVAŞ Ö., ÇELİK S.
6th International HYBRID Conference on Mathematical Advances and Applications, İstanbul, Turkey, 10 May 2023, pp.159
- II. **Bicovariant Differential Calculus on the Superalgebra $O(GL_h, h'(1|1))$**
ÇELİK S., TEMLİ İ.
19th International Geometry Symposium 27 - 30 June 2022, Trakya University, Edirne-TURKEY, Edirne, Turkey, 27 June 2020, pp.115-116
- III. **A DIFFERENTIAL CALCULUS ON THE SPACE R_{h^3}**
Çelik S., Öksüz Ö.
4.International 19 May Innovative Scientific Approaches Congress, Samsun, Turkey, 21 December 2020, pp.393-401
- IV. **The symmetry group of the differential calculus on $F(R_q(1,1))$**
ÇELİK S., ÇELİK S., TEMLİ İ.
16TH INTERNATIONAL GEOMETRY SYMPOSIUM, 4 - 07 July 2018, pp.252-253
- V. **Covariant Differential Calculi on $\mathcal{F}(\mathbb{R}_q(1|1))$**
ÇELİK S., İLKNUR T.
ICOMAA-2018, 11 - 13 May 2018
- VI. **LEFT COVARIANT DIFFERENTIAL CALCULI ON $O(R_q(1/2))$**
ÇELİK S.
2. INTERNATIONAL CONGRESS ON STATISTICS MATHEMATICS AND ANALYTICAL METHODS, 2 - 03 March 2018
- VII. **An h -deformation of the Superspace $R(1/2)$ via a contraction**
ÇELİK S., ÇELİK S., BULUT F.
13th Algebraic Hyperstructures and its Applications (AHA2017), İstanbul, Turkey, 24 - 27 July 2017, pp.117-118
- VIII. **Bicovariant Differential Calculus on $F(R_q(2))$**
ÇELİK S., BULUT F.
15th International Geometry Symposium, 3 - 06 July 2017
- IX. **A differential calculus on h -superspace**
ÇELİK S., SALTURK E.

Noncommutative structures in mathematics and physics, 6370, K. Vlaam. Acad. BelgieWet. Kunsten(KVAB), Brussels, Belgium, 22 - 26 July 2008

X. **Differential Geometry of the q superspace $R_{q|1|2}$**

YAŞAR E., ÇELİK S.

Integrable systems and Quantum Symmetries, The XVIIIth International Colloquium, PRAG, Czech Republic, 18 - 20 June 2009

XI. **The Hopf algebra structure of the Z_3 graded quantum supergroup $GL_{q|j|1|1}$**

ÇELİK S., YAŞAR E.

Algebra, Geometry, and Mathematical Physics, 4th Baltic-nordic Workshop, Tartu, Estonia, 9 - 11 October 2008

Supported Projects

ÇELİK S., ÇELİK S., Project Supported by Higher Education Institutions, $F(C_h^2|1)$ Hopf Süper Cebiri Üzerine Genişletilmiş Diferansiyel Hesap, 2023 - 2023

ÇELİK S., Temli İ., ÇELİK S., Project Supported by Higher Education Institutions, $GL_{p,q}(1|1)$ Kuantum Süper Grup Üzerine İki-Kovaryant Diferansiyel Hesaplar, 2022 - 2023

Çelik S., TUBITAK Project, Cartan calculus on the superalgebra $O(Cq^2|1)$, 2021 - 2022

ÇELİK S., ÇELİK S., Project Supported by Higher Education Institutions, Yeni bir kuantum süper grup ve onun Gauss ayrışımı, 2021 - 2021

Scientific Refereeing

Project Supported by Higher Education Institutions, BAP Research Project, Ataturk University, Turkey, March 2024
Journal of Mathematics, National Scientific Refreed Journal, March 2023

Project Supported by Higher Education Institutions, BAP Research Project, Yildiz Technical University, Turkey, January 2023

Punjab University Journal of Mathematics, Other Indexed Journal, November 2019

Advances in Applied Clifford Algebras, SCI Journal, December 2018

Mathematica Bohemica, Other Indexed Journal, December 2018

Mathematical Methods in the Applied Sciences, SCI Journal, July 2018

Advances in Applied Clifford Algebras, SCI Journal, January 2016

Journal of Physics A: Mathematical and Theoretical, SCI Journal, August 2015

Metrics

Publication: 78

Citation (WoS): 130

Citation (Scopus): 140

H-Index (WoS): 7

H-Index (Scopus): 8

Congress and Symposium Activities

4. International 19 May Innovative Scientific Approaches Congress, Attendee, Samsun, Turkey, 2020

16th Int. Geometry Symposium, Attendee, Manisa, Turkey, 2018

Int. Con. On Mathematical Advances and its Applications, Attendee, İstanbul, Turkey, 2018

Int. Congress on Mathematics Statistics and Analytic Methods, Attendee, İstanbul, Turkey, 2018

13th Algebraic Hyperstructures and its Applications, Attendee, İstanbul, Turkey, 2017

Awards

Çelik S., Yayın Teşvik, Tübitak, September 2020

Çelik S., TÜBİTAK Teşvik Ödülü, Tübitak, October 2019

Çelik S., Yayın Teşvik, Tübitak, July 2006

Çelik S., Yayın Teşvik, Tübitak, September 2005

Çelik S., Yayın Teşvik, Tübitak, July 2002

Çelik S., Yayın Teşvik, Tübitak, August 2000

Çelik S., Yayın Teşvik, Tübitak, July 1999

Çelik S., Yayın Teşvik, Tübitak, May 1998

Çelik S., Yayın Teşvik, Tübitak, January 1997

Çelik S., Yayın Teşvik, Tübitak, January 1996

Çelik S., Yayın Teşvik, Tübitak, January 1993