

## CV



**1. Name and Surname : Hakan ŞİMŞEK**

**Contact Informations**  
**Current Address : Varsak Karşıyaka mah. Serin Hava Sitesi 78. Ada B2 Blok No:11  
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**2. Place/Date of Birth : Ankara / 01.05.1987**

**3. Academic Degree : Doctor (Phd)**

**4. Education :**

Degree	University	Department	Year
Licence	Akdeniz University	Mathematics	2004-2008
Master	Akdeniz University	Mathematics -Topology	2008-2010
Doctorate	Akdeniz University	Mathematics -Geometry	2011-2016

### 5. Thesis

1. ŞİMŞEK H., **On Fuzzy Interior Operators and Fuzzy Closure Operators**, Master's Thesis, Supervisor Prof. Dr. Mustafa Demirci, June 2010.
2. ŞİMŞEK H., **Focal Curves and Focal Surfaces In Finite Dimensional Minkowski Spaces**, Doctorate's Thesis, Supervisor Assoc. Prof. Mustafa Özdemir, April 2016.

### 6. Research Interests

Curves and Surfaces Theory, Riemann and Finsler Manifolds, Minkowski-Lorentzian Geometry, Singularity Theory, Kinematics Geometry and Quaternions Theory, Clifford's Algebras, Fuzzy Logic, Fuzzy Topology.

### 7. Publications

**7.1. Articles Published in International Journals (Journals in the SCI: Science Citation Index; SSCI: Social Science Citation Index; AHCI: Arts&Humanities Citation Index)**

1. ÖZDEMİR M., ERDOĞDU M., ŞİMŞEK H., On the Eigenvalues and Eigenvectors of a Lorentzian Rotation Matrix by Using Split Quaternions. *Adv. Appl. Clifford Algebras*, 24 (2014), 179-192.
2. ÖZDEMİR M., ERDOĞDU M., ŞİMŞEK H., ERGİN A. A., Backlund Transformation for Spacelike Curves in the Minkowski Space-Time, *Kuwait J. Sci*, 41 (2014), 63-80.
3. ŞİMŞEK H., ÖZDEMİR M., The Sub-Parabolic Lines in the Minkowski 3-Space, *Results in Mathematics*, 67 (2015), 417-430.
4. ŞİMŞEK H., ÖZDEMİR M., Similar and Self-Similar Curves in Minkowski n-Space, *Bull. Korean Math. Soc.*, 52 (2015), No. 6, 2071–2093.
5. ŞİMŞEK H., ÖZDEMİR M., Backlund's Theorem for n Dimensional Lorentzian Submanifold in the Minkowski Space  $E_1^{2n-1}$ , *Results in Mathematics*, 69 (2016), 201–223.
6. ŞİMŞEK H., ÖZDEMİR M., Generating hyperbolical rotation matrix for a given hyperboloid, *Linear Algebra and Its Applications*, 496 (2016), 221-245.
7. ŞİMŞEK H., ÖZDEMİR M., On Conformal Curves in 2-Dimensional de Sitter Space, *Adv. Appl. Clifford Algebras*, 26 (2016), 757-770.
8. ŞİMŞEK H., ÖZDEMİR M., Similar Null Cartan Curves in the Minkowski Space-Time, (2016) Under review.
9. ŞİMŞEK H., On Focal Curves of Null Cartan Curves, *Turkish Journal of Mathematics*, (2016) Under review.
10. ŞİMŞEK H., ÖZDEMİR M., Hyperbolical Rotation About an Axis Lying on a Light-Cone, (2016) Under review.

## 7.2. Other Articles Published in International Journals

### 7.3. Articles Published in National Journals

1. ŞİMŞEK H., ÖZDEMİR M., On Focal Surfaces Formed by Timelike Normal Rectilinear Congruence, *Commun. Fac. Sci. Univ. Ank. Series A1 Math. Stat.*, Vol. 65, Number 2, Pages 55-64 (2016).
2. ŞİMŞEK H., ÖZDEMİR M., Shape Curvatures of the Lorentzian Plane Curves, *Commun. Fac. Sci. Univ. Ank. Series A1 Math. Stat.*, (2016) Under Review.

### 7.4. International Scientific Presentations

1. ŞİMŞEK H., ÖZDEMİR M., The Similarity Invariants of Non-Lightlike Curves in the Minkowski 3-Space, *28th International Conference of The Jangjeon Mathematical Society*, Antalya-TURKEY, May 15-19, 2015.

2. ŞİMŞEK H., ÖZDEMİR M., On Focal Curves Obtained by Null Cartan Curves, *International Conference on Advancement in Mathematical Sciences*, Antalya-TURKEY, November 5-7, 2015.
3. ŞİMŞEK H., ÖZDEMİR M., Rodrigues and Cayley Formulas for Hyperbolic Rotation in 3-Dimensional Space, *International Conference on Advances in Natural and Applied Sciences*, Antalya-TURKEY, April 21-23, 2016.
4. ŞİMŞEK H., ÖZDEMİR M., Getting an Hyperbolic Rotation Matrix by Householder's Method in 3-Dimensional Space, *14. International Geometry Symposium*, Pamukkale, Denizli-TURKEY, May 25-28, 2016.

#### 7.5. National Scientific Presentations

1. ŞİMŞEK H., ÖZDEMİR M., On Focal Surfaces Which Form Timelike Rectilinear Congruence, *XII. Geometri Sempozyumu*, Bilecik-TÜRKİYE, 23-26 Haziran 2014.
2. ŞİMŞEK H., ÖZDEMİR M., The Geometric Invariants of Null Cartan Curves Under Similarity Transformations, *XIII. Geometri Sempozyumu*, İstanbul-TÜRKİYE, 27-30 Temmuz 2015.
3. ŞİMŞEK H., ÖZDEMİR M., On Conformal Curves in 2-Dimensional de Sitter Space, *28. Ulusal Matematik Sempozyumu*, Antalya-TÜRKİYE, 7-9 Eylül 2015.

#### 8. Other Scientific Activities and Certificates

1. 14th Antalya National Mathematics Olympiad Jury Member, Antalya 2009.
2. The Guidance of Tübitak 43. Secondary Students Research Project Regional Competition, Antalya, March 19-23, 2012.
3. Pedagogical Formation Certificate, Akdeniz University, Faculty of Education, 2014.
4. Idea Development for Research Projects, Project Preparation and Application of Project Management Certificate of Participation, Antalya International University, June 16-18, 2014.

#### 9. Research Project Involvement

1. **Einstein Metrics in Finsler Geometries**, Scholarship, Tübitak 1001 Research Project, Project Number: **113F311**, Principal investigator: Assoc. Prof. Esra Şengelen Sevim (İstanbul Bilgi University), March 2014-September 2016.

#### 10. Teaching Experience

**Teaching Assistant (Akdeniz University):** Analytical Geometry I-II (2011-2013), Linear Algebra (2012-2013), Topology I-II (2008-2010).

**Teaching Assistant (Antalya International University):** Calculus I, II (for Engineering and Architecture) (2014-2016 July).

**Lecturer Dr. (Antalya International University) October 2016-...**

**11. Foreign Language and Level**

1. English, YDS 2014 Fall Semester Score: 83.75

**12. Computer Skills**

1. LaTeX, Maple, MATLAB.

**13. References**

**Assoc. Prof. Mustafa ÖZDEMİR,**

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Vice-Dean, Faculty of Science

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