

## Prof. OSMAN MUCUK

### Personal Information

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### International Researcher IDs

ORCID: 0000-0001-7411-2871

Publons / Web Of Science ResearcherID: AAT-1896-2021

ScopusID: 7801580156

Yoksis Researcher ID: 6164

### Education Information

Doctorate, University of Wales, Bangor, School Of Mathematics, Mathematics, United Kingdom 1989 - 1993

Postgraduate, Erciyes University, Fen Bilimleri Enstitüsü, Matematik Bölümü, Turkey 1985 - 1988

Undergraduate, Inonu University, Fen-Edebiyat Fakültesi, Matematik, Turkey 1981 - 1985

### Foreign Languages

English, B2 Upper Intermediate

### Dissertations

Doctorate, Monodromy groupoid of a topological groupoid and covering groups of non-connected topological groups, University Of Wales, Bangor, School Of Mathematics, Mathematics, 1993

Postgraduate, Hausdorff Toplanabilme, Erciyes Üniversitesi, Fen Bilimleri Enstitüsü, Matematik Bölümü, 1988

### Research Areas

Mathematics, Algebraic Topology, Sequences, Series, Summability, Natural Sciences

### Academic Titles / Tasks

Professor, Erciyes University, Fen Fakültesi, Matematik, 2002 - Continues

Associate Professor, Erciyes University, Fen Fakültesi, Matematik, 1996 - 2002

Assistant Professor, Erciyes University, Fen Fakültesi, Matematik, 1994 - 1996

### Academic and Administrative Experience

Erciyes Üniversitesi, Fen Edebiyat Fakültesi, Matematik, 2009 - 2010

Erciyes University, 2009 - 2010  
Erciyes Üniversitesi, Fen Edebiyat Fakültesi, Matematik, 2003 - 2009  
Erciyes University, 2003 - 2009  
Erciyes Üniversitesi, Fen Edebiyat Fakültesi, Matematik, 2000 - 2006  
Erciyes University, 2000 - 2006  
Erciyes Üniversitesi, Fen Edebiyat Fakültesi, Matematik, 2002 - 2005  
Erciyes Üniversitesi, Fen Bilimleri Enstitüsü, Matematik, 1998 - 2000  
Erciyes University, 1998 - 2000

## Courses

Genel Matematik, Undergraduate, 2013 - 2014  
GENEL TOPOLOJİ , Undergraduate, 2013 - 2014  
Cebirsel Topoloji, Postgraduate, 2013 - 2014

## Advising Theses

MUCUK O., Çok işlemlerli gruplarda bölüm crossed modülleri ve grupoidleri, Doctorate, T.Şahan(Student), 2014  
MUCUK O., Çapraz modül ve katlı grupoidlerde normallik ve bölüm objeleri, Postgraduate, S.Demir(Student), 2014  
MUCUK O., Dizisel Anlamda Süreklilik, Kompaktlık ve İrtibatlılık, Postgraduate, F.Gençoğlu(Student), 2013  
MUCUK O., İç (İnternal) groupoidler ve örtü morfizmleri, Doctorate, H.Fulya(Student), 2013  
MUCUK O., Kategorik grupların örtüleri üzerine, Postgraduate, T.ŞAHAN(Student), 2010  
MUCUK O., Çok işlemlerli topolojik grupların örtü morfizmleri ve Local topolojik gruplar, Doctorate, H.Yeşim(Student), 2010  
MUCUK O., Internal (İç) Kategoriler ve Crossed Modüller, Postgraduate, Ö.BALKANLI(Student), 2009  
MUCUK O., Genelleştirilmiş monodromy groupoidi ve H-grup groupoid, Doctorate, B.BAĞRIYANIK(Student), 2009  
MUCUK O., Topolojik grupların evrensel örtüleri üzerine, Postgraduate, H.Fulya(Student), 2007  
MUCUK O., Topolojik R-modül örtüleri ve internal groupoid örtü morfizmleri, Doctorate, N.ALEMDAR(Student), 2007  
MUCUK O., Temel groupoidler ve örtü morfizmleri, Postgraduate, H.Yeşim(Student), 2003  
MUCUK O., Topolojik groupoidler ve morfizmleri, Postgraduate, B.BAĞRIYANIK(Student), 2003  
MUCUK O., Topolojik grupların örtü uzayları", Postgraduate, O.Alp(Student), 2002

## Jury Memberships

Appointment to Academic Staff-Assistant Professorship, Profesörlük Atamaları, Profesörlük Ataması , January, 2014  
Associate Professor Exam, Doçentlik sınavı, Doçentlik Jurisi, October, 2013  
Doctorate, Doktora Tez savunması, Doktora Sınavı, July, 2012  
Appointment to Academic Staff-Assistant Professorship, Doçentlik Ataması, Doçentlik Ataması, June, 2012

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **On G-Compactness of Topological Groups with Operations**  
Mucuk O., Çakallı H.  
FILOMAT, vol.36, no.20, pp.7113-7121, 2022 (SCI-Expanded)
- II. **Liftings and covering morphisms of crossed modules in group-groupoids**  
Demir Karakas S., MUCUK O.  
TURKISH JOURNAL OF MATHEMATICS, vol.45, no.3, pp.1407-1417, 2021 (SCI-Expanded)
- III. **Groups up to congruence relation and from categorical groups to c-crossed modules**  
Datuashvili T., MUCUK O., ŞAHAN T.

JOURNAL OF HOMOTOPY AND RELATED STRUCTURES, vol.15, pp.625-640, 2020 (SCI-Expanded)

- IV. **Crossed Modules, Double Group-Groupoids and Crossed Squares**  
Temel S., Şahan T., Mucuk O.  
Filomat, vol.34, no.6, pp.1755-1769, 2020 (SCI-Expanded)
- V. **Covering morphisms of topological internal groupoids**  
MUCUK O., Akiz H. F.  
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.49, no.3, pp.1020-1029, 2020 (SCI-Expanded)
- VI. **Group-groupoid actions and liftings of crossed modules**  
MUCUK O., Sahan T.  
GEORGIAN MATHEMATICAL JOURNAL, vol.26, no.3, pp.437-447, 2019 (SCI-Expanded)
- VII. **Topological Aspect of Monodromy Groupoid for a Group-Groupoid**  
MUCUK O., Demir S.  
FILOMAT, vol.33, no.2, pp.393-401, 2019 (SCI-Expanded)
- VIII. **G-Connectedness in Topological Groups with Operations**  
MUCUK O., Cakalli H.  
FILOMAT, vol.32, no.3, pp.1079-1089, 2018 (SCI-Expanded)
- IX. **Normality and quotient in crossed modules over groupoids and double groupoids**  
MUCUK O., DEMIR S.  
TURKISH JOURNAL OF MATHEMATICS, vol.42, no.5, pp.2336-2347, 2018 (SCI-Expanded)
- X. **Normality and Quotients in Crossed Modules and Group-groupoids**  
MUCUK O., ŞAHAN T., ALEMDAR N.  
APPLIED CATEGORICAL STRUCTURES, vol.23, no.3, pp.415-428, 2015 (SCI-Expanded)
- XI. **Monodromy Groupoid of an Internal Groupoid in Topological Groups with Operations**  
MUCUK O., Akiz H. F.  
FILOMAT, vol.29, no.10, pp.2355-2366, 2015 (SCI-Expanded)
- XII. **Covering Groupoids of Categorical Rings**  
MUCUK O., DEMIR S.  
FILOMAT, vol.29, no.1, pp.39-49, 2015 (SCI-Expanded)
- XIII. **On G-Sequential Continuity**  
MUCUK O., Sahan T.  
FILOMAT, vol.28, no.6, pp.1181-1189, 2014 (SCI-Expanded)
- XIV. **Coverings and crossed modules of topological groups with operations**  
MUCUK O., Sahan T.  
TURKISH JOURNAL OF MATHEMATICS, vol.38, no.5, pp.833-845, 2014 (SCI-Expanded)
- XV. **COVERING GROUPOIDS OF CATEGORICAL GROUPS**  
MUCUK O., Şahan T.  
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.42, no.4, pp.419-430, 2013 (SCI-Expanded)
- XVI. **ON CONNECTEDNESS VIA A SEQUENTIAL METHOD**  
Cakalli H., MUCUK O.  
REVISTA DE LA UNION MATEMATICA ARGENTINA, vol.54, no.2, pp.101-109, 2013 (SCI-Expanded)
- XVII. **Existence of covering topological R-modules**  
ALEMDAR N., MUCUK O.  
FILOMAT, vol.27, no.6, pp.1121-1126, 2013 (SCI-Expanded)
- XVIII. **Coverings of internal groupoids and crossed modules in the category of groups with operations**  
Akiz H. F., ALEMDAR N., MUCUK O., Şahan T.  
GEORGIAN MATHEMATICAL JOURNAL, vol.20, no.2, pp.223-238, 2013 (SCI-Expanded)
- XIX. **THE LIFTINGS OF R-MODULES TO COVERING GROUPOIDS**  
ALEMDAR N., MUCUK O.  
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.41, no.6, pp.813-822, 2012 (SCI-Expanded)
- XX. **Group-groupoids and monodromy groupoids**  
MUCUK O., Kilicarslan B., Sahan T., ALEMDAR N.

- TOPOLOGY AND ITS APPLICATIONS, vol.158, no.15, pp.2034-2042, 2011 (SCI-Expanded)
- XXI. **Local subgroupoids II: Examples and properties**  
BROWN R., İÇEN İ., MUCUK O.  
TOPOLOGY AND ITS APPLICATIONS, vol.127, no.3, pp.393-408, 2003 (SCI-Expanded)
- XXII. **A monodromy principle for universal coverings of topological rings**  
MUCUK O., OZDEMİR M.  
INDIAN JOURNAL OF PURE & APPLIED MATHEMATICS, vol.31, no.12, pp.1531-1535, 2000 (SCI-Expanded)
- XXIII. **Coverings and ring-groupoids**  
MUCUK O.  
GEORGIAN MATHEMATICAL JOURNAL, vol.5, no.5, pp.475-482, 1998 (SCI-Expanded)
- XXIV. **COVERING GROUPS OF NON-CONNECTED TOPOLOGICAL-GROUPS REVISITED**  
BROWN R., MUCUK O.  
MATHEMATICAL PROCEEDINGS OF THE CAMBRIDGE PHILOSOPHICAL SOCIETY, vol.115, pp.97-110, 1994 (SCI-Expanded)

### Articles Published in Other Journals

- I. **ABOUT SEQUENTIALLY OPEN AND CLOSED SUBSETS IN PRODUCT SPACES**  
MUCUK O., TEKE M. B.  
Maltepe Journal of Mathematics, vol.5, no.2, pp.41-45, 2023 (Peer-Reviewed Journal)
- II. **Normality and Quotient in the Category of Crossed Modules Within the Category of Groups with Operations**  
Sahan T., MUCUK O.  
BOLETIM SOCIEDADE PARANAENSE DE MATEMATICA, vol.38, no.7, pp.169-179, 2020 (ESCI)
- III. **Actions of Double Group-Groupoids and Covering Morphism**  
Mucuk O., Demir S.  
GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.33, no.4, pp.810-819, 2020 (ESCI)
- IV. **Liftings of Crossed Modules in the Category of Groups with Operations**  
Akiz H. F., MUCUK O., Sahan T.  
BOLETIM SOCIEDADE PARANAENSE DE MATEMATICA, vol.38, no.7, pp.181-193, 2020 (ESCI)
- V. **LACUNARY STATISTICALLY UPWARD AND DOWNWARD HALF QUASI-CAUCHY SEQUENCES**  
Cakalli H., MUCUK O.  
JOURNAL OF MATHEMATICAL ANALYSIS, vol.7, no.2, pp.12-23, 2016 (ESCI)
- VI. **Local group-groupoids**  
MUCUK O., AY H. Y., BAĞRIYANIK B.  
İstanbul Univ. Fen Fak. Dergisi, no.3, pp.97-108, 2008 (Peer-Reviewed Journal)
- VII. **C MANFOLD GRUPLARININ ÖRTÜ GRUPLARI**  
ALEMDAR N., MUCUK O., ÖZDEMİR M.  
C. B. Ü. Fen Bilimleri Dergisi, vol.4, no.1, pp.9-18, 2008 (Peer-Reviewed Journal)
- VIII. **Universal Covers of Topological Vector Spaces**  
ALEMDAR N., MUCUK O.  
AlgebrasGroups and Geometries, no.24, pp.119-128, 2007 (Peer-Reviewed Journal)
- IX. **Some results on Local subgroupoids**  
İÇEN İ., MUCUK O.  
Italian Journal of Pure and Applied Mathematics, no.13, pp.9-20, 2003 (Peer-Reviewed Journal)
- X. **Holonomy, extendibility, and the star universal cover of a topological groupoid**  
MUCUK O., İÇEN İ.  
APPLIED GENERAL TOPOLOGY, vol.1, no.1, pp.79-89, 2003 (ESCI)
- XI. **Holonomy and Monodromy Groupoids, Lie Algebroids**  
MUCUK O.

Banach Center Publications, Institute of Mathematics, Polish Academy of Science, vol.54, pp.9-20, 2001 (Peer-Reviewed Journal)

**XII. Extendibility, monodromy and local triviality for topological groupoids**

MUCUK O., İÇEN İ.

International Journal of Mathematics and Mathematical Science, vol.27, no.3, pp.131-140, 2001 (Peer-Reviewed Journal)

**XIII. Locally topological groupoids**

MUCUK O.

TURKISH JOURNAL OF MATHEMATICS, vol.21, no.2, pp.235-243, 1997 (Scopus)

**XIV. An application of the monodromy groupoid**

MUCUK O.

TURKISH JOURNAL OF MATHEMATICS, vol.21, no.2, pp.227-0, 1997 (Scopus)

**XV. Star topological groupoids**

MUCUK O.

TURKISH JOURNAL OF MATHEMATICS, vol.20, no.2, pp.227-232, 1996 (Scopus)

**XVI. Foliations locally Lie groupoids and holonomy**

RONALD B., MUCUK O.

Cah. Top. Geom. Diff. Cat., vol.37, no.1, pp.61-71, 1996 (Peer-Reviewed Journal)

**XVII. Foliations locally topological groupoids, and holonomy**

MUCUK O.

Cah. Top. Geom. Diff. Cat., vol.37, pp.61-71, 1995 (Peer-Reviewed Journal)

**XVIII. Monodromy groupoid of a Lie groupoid**

MUCUK O.

Cah. Top. Geom. Diff. Cat., pp.345-370, 1995 (Peer-Reviewed Journal)

## Books & Book Chapters

**I. Topoloji ve Kategori Teorisi Geliştirilmiş 3.Basım**

MUCUK O.

NOBEL AKADEMİK YAYINCILIK EĞİTİM DANIŞMANLIK TİC. LTD. ŞTİ., Ankara, 2023

**II. Topoloji ve Kategori**

MUCUK O.

Nobel Yayınları, Ankara, 2010

**III. Topoloji (1. Basım)**

MUCUK O.

Nobel Yayınları Ankara, Ankara, 2009

**IV. Lineer Dönüşümler ve Matrisler**

MUCUK O.

in: Uygulamalı Lineer Cebir, Prof Dr. Akın Ö., Editor, Palme Yayıncılık, Ankara, pp.253-290, 2002

## Refereed Congress / Symposium Publications in Proceedings

**I. ABOUT VARIATIES OF G-SEQUENTAILLY METHODS, G-HULLS AND G-CLOSURES**

BEHRAM S., MUCUK O.

7th International Conference of Mathematical Sciences (ICMS 2023), İstanbul, Turkey, 05 July 2023, vol.5, pp.81-86

**II. Counter examples of G -convergent methods**

MUCUK O., Behram S.

6th International Conference of Mathematical Sciences, ICMS 2022, Hybrid, Istanbul, Turkey, 20 - 24 July 2022, vol.2879

- III. **G-Sequential methods in product spaces**  
Mucuk O., Behram S.  
5 th International Conference of Mathematical Sciences (ICMS 2021), İstanbul, Turkey, 23 - 27 June 2021, pp.1-4
- IV. **G-Connectedness of product topological spaces**  
Mucuk O., Behram S., Çakallı H.  
5 th International Conference of Mathematical Sciences (ICMS 2021), İstanbul, Turkey, 23 - 27 June 2021, pp.1-4
- V. **Normality and quotients in local crossed modules and local group-groupoids**  
Akız H. F., Mucuk O.  
5 th International Conference of Mathematical Sciences (ICMS 2021), İstanbul, Turkey, 23 - 27 June 2021, pp.1-4
- VI. **G-Compactness and Local G-Compactness of Topological Groups with Operations**  
Mucuk O., Cakalli H.  
4th International Conference of Mathematical Sciences (ICMS), ELECTR NETWORK, 17 - 21 June 2020, vol.2334
- VII. **Internal Categories in the Category of Semi Abelian Algebras**  
Mucuk O., Demir S.  
4th International Conference of Mathematical Sciences (ICMS), ELECTR NETWORK, 17 - 21 June 2020, vol.2334
- VIII. **Local Group-Groupoids and Local Crossed Modules**  
Akız H. F., Mucuk O.  
4th International Conference of Mathematical Sciences (ICMS), ELECTR NETWORK, 17 - 21 June 2020, vol.2334
- IX. **Topolojik Çaprazlanms Modüllerin Yükselmeleri**  
ŞAHAN T., MUCUK O.  
14. Ankara Matematik Günleri (AMG 2019), Ankara, Turkey, 28 - 29 June 2019, pp.119
- X. **Group-groupoids and crossed module aspects of monodromy groupoids**  
Mucuk O., Demir S., Sahan T.  
International Conference of Mathematical Sciences (ICMS), İstanbul, Turkey, 31 July - 06 August 2018, vol.2086
- XI. **Crossed module aspects of monodromy groupoids for topological internal groupoids**  
Mucuk O., Demir S., Sahan T.  
3rd International Conference of Mathematical Sciences (ICMS), İstanbul, Turkey, 4 - 08 September 2019, vol.2183
- XII. **Topological aspect of monodromy groupoid for a topological internal groupoid**  
Akız H. F., MUCUK O.  
3rd International Conference of Mathematical Sciences (ICMS), İstanbul, Turkey, 4 - 08 September 2019, vol.2183
- XIII. **Internal groupoid actions and liftings of crossed modules within groups with operations**  
Akız H. F., MUCUK O., Sahan T.  
International Conference of Mathematical Sciences (ICMS), İstanbul, Turkey, 31 July - 06 August 2018, vol.2086
- XIV. **Quotients of monodromy groupoids**  
MUCUK O., Sahan T.  
International Conference of Mathematical Sciences (ICMS), İstanbul, Turkey, 31 July - 06 August 2018, vol.2086
- XV. **Normality and Quotient of Crossed Modules within Group with Operations**  
Sahan T., MUCUK O.  
International Conference of Mathematical Sciences (ICMS), İstanbul, Turkey, 31 July - 06 August 2018, vol.2086
- XVI. **Crossed modules of group-groupoids and double group-groupoids**  
TEMEL S., ŞAHAN T., MUCUK O.  
II. International Conference on Pure and Applied Mathematics (ICPAM 2018), Van, Turkey, 11 - 13 September 2018
- XVII. **On Liftings of Crossed Modules**  
MUCUK O., ŞAHAN T.  
International Conference on Mathematics and Mathematics Education (ICMME-2017), Harran University, Şanlıurfa, Turkey, 11 - 13 May 2017
- XVIII. **Coverings of topological semi-abelian algebras**  
MUCUK O., DEMİR S.  
3rd International Conference on Analysis and Applied Mathematics (ICAAM), Almaty, Kazakhstan, 7 - 10 September 2016, vol.1759

- XIX. G-sequentially connectedness for topological groups with operations**  
MUCUK O., Cakalli H.  
3rd International Conference on Analysis and Applied Mathematics (ICAAM), Almaty, Kazakhstan, 7 - 10 September 2016, vol.1759
- XX. Lacunary statistically upward half quasi-Cauchy sequences**  
Cakalli H., MUCUK O.  
International Conference on Advancements in Mathematical Sciences (AMS), Antalya, Turkey, 5 - 07 November 2015, vol.1676
- XXI. Normality and quotient in crossed modules and some related categories**  
MUCUK O.  
Workshop on Applications of Topology in Mathematics and Computer Science, Ankara, Turkey, 7 - 08 September 2015
- XXII. Çapraz Modüller ve Katlı Grupoidlerde Normallik ve Bölüm**  
MUCUK O., DEMİR S.  
10. Ankara Matematik Günleri, Ankara, Turkey, 11 - 12 June 2015
- XXIII. Topological Internal Groupoids and Their Coverings**  
AKIZ H. F., ALEMDAR N., ŞAHAN T., MUCUK O.  
IECMSA 2012, 3 - 07 September 2012
- XXIV. Topolojik Modüllerin Evrensel Örtüleri**  
ALEMDAR N., MUCUK O.  
AMG-2012, Turkey, 31 May - 01 June 2012
- XXV. İnternal Groupoids, Topological Group with Operations And Crossed Modules**  
AKIZ H. F., ALEMDAR N., MUCUK O.  
23. Ulusal Matematik Sempozyumu, Kayseri, Turkey, 4 - 07 August 2010
- XXVI. Çok İşlemli Grupların Kategorisinde İç (İnternal) Grupoidlerin Örtü Grupoidleri**  
ALEMDAR N., MUCUK O.  
23. Ulusal Matematik Sempozyumu, Turkey, 4 - 07 August 2010
- XXVII. R-Modüllerin Örtü Grupoidlerine Yükselmesi**  
ALEMDAR N., MUCUK O.  
AMG-2010, Turkey, 3 - 04 June 2010
- XXVIII. Covering Groupoids and Fundamental Groupoids**  
ALEMDAR N., MUCUK O.  
ICTA-2009, 6 - 11 July 2009

## Supported Projects

MUCUK O., KILIÇARSLAN B. B., Project Supported by Higher Education Institutions, TOPOLOJİK GRUPLARIN ÖRTÜLERİ VE GENELLEŞTİRİLMİŞ MONODROMY GROUPOİDİ, 2007 - 2009

## Metrics

Publication: 75

Citation (WoS): 219

Citation (Scopus): 102

H-Index (WoS): 9

H-Index (Scopus): 5

## Congress and Symposium Activities

Topology and Applications (ATA 2014), May 26-29, 2014 Vrnjacka Banja, Serbia,, Attendee, Vrnjacka Banja, Serbia And Montenegro, 2014

13th Serbian Mathematical Congress, May 22nd-25th, Attendee, Vrnjacka Banja, Serbia And Montenegro, 2014

International Conference of Mathematical Sciences, Maltepe Üniversitesi, İstanbul 4-10 August, Attendee, İstanbul, Turkey, 2009

2 nd International Conference on Topology and its Applications, Hacettepe University, Attendee, Ankara, Turkey, 2009

International Topology Conference, Hacettepe University, 12-18 August, Attendee, Ankara, Turkey, 2001

Workshop on Orbifolds groupoids and their applications University of Wales, Bangor, U.K 11-15 September., Attendee, Bangor, Turkey, 2000

## **Scholarships**

Bilimsel ziyaretçi desteği, University, 2004 - Continues

Doktora sonrası araştırma bursu, TÜBİTAK, 2004 - Continues

Araştırma destek bursu, University, 2000 - Continues

Yurtdışı doktora bursu, Ministry of Education, 1989 - Continues

## **Non Academic Experience**

Erciyes Üniversitesi