

Serkan Gumus, Ph.D.

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EDUCATION

- **Post Doctorate (Post-doc), Applied Mathematics** **Aug 2012 – Aug 2013**
Department of Civil, Environmental and Construction Engineering
University of Central Florida, FL, USA
- **Doctor of Philosophy, Mathematics** **Sep 2002 – Feb 2008**
Gazi University Ankara, Turkey
Dissertation Title: “Fuzzy sheaves that are formed by homotopy over fuzzy topological Spaces”
Advisor: Prof. Cemil Yildiz
- **Master of Science, Mathematics** **Sep 1998 – Jan 2002**
Gazi University, Ankara, Turkey
Master’s Thesis: “Paths on fuzzy topological space”
Advisor: Prof. Cemil Yildiz
- **Bachelor of Science, Mathematics** **Sep 1994 - Jun 1998**
Gazi University, Ankara, Turkey

PROFESSIONAL EXPERIENCE

- **Freelance** **Nov 2016 – Sep 2019**
- **Associate Professor of Mathematics** **May 2015 –Nov 2016**
Department of Basic Sciences
Turkish Military Academy, Ankara, Turkey
- **Associate Professor of Mathematics (taught one course)** **Jan 2016 – Jun 2016**
Department of Mathematics
Gazi University, Ankara, Turkey
- **Assistant Professor of Mathematics** **Sep 2011 – Apr 2015**
Department of Basic Sciences
Turkish Military Academy, Ankara, Turkey

- **Instructor** **Aug 2003 – Aug 2011**
Department of Basic Sciences
Turkish Military Academy, Main Campus, Ankara, Turkey
- **Instructor** **May 2001 – Aug 2003**
Department of Basic Sciences
Turkish Military Academy, Balikesir Branch, Turkey
- **Teaching Assistant** **Sep 1998 - Apr 2001**
Department of Mathematics
Gazi University, Ankara, Turkey

RESEARCH INTERESTS

- Metric spaces, Homotopy Theory, Fuzzy Set Theory, Decision Support Systems, Multi Criteria Decision Making, Sustainability, Green Energy, Personnel Selection, Green Supplier Selection, Personnel Promotion, Crises Analysis, Fuzzy Aggregation Operators.

TEACHING EXPERIENCE

- **Instructor/Assistant and Associate Professor** **Aug 2003 – Nov 2016**
Department of Basic Sciences, Turkish Military Academy
 - Pre-Calculus
 - Calculus I, II, & III
 - Differential Equations
 - Linear Algebra

Responsibilities: Planned and prepared lessons. Delivered lectures in small classes of 25 students. Held office hours and review sessions. Created quizzes, assignments and exams. Supervised teaching assistants. Used the online learning platform WebAssign for Pre-Calculus and Calculus I & II.
- **Instructor** **Jan 2016 - Jun 2016**
Department of Mathematics, Gazi University
 - Topology

Responsibilities: Planned and prepared lessons. Delivered lectures in small classes of 25 students. Held office hours and review sessions. Created and graded quizzes, assignments and exams.
- **Teaching Assistant** **Sep 1998 - Apr 2001**
Department of Mathematics, Gazi University
 - Pre-Calculus

- Calculus I
- Calculus II
- Topology

Responsibilities: Conducted weekly 1-hour problem sessions. Held office hours and review sessions. Created quizzes. Graded quizzes, assignments and exams.

OTHER EXPERIENCE

Tutor/Grader

Sep 1998 - Apr 2001

Department of Mathematics, Gazi University

- Pre-Calculus
- Calculus I
- Calculus II
- Topology

PROFESSIONAL SERVICE

- Search Chair for Student Recruitment at Turkish Military Academy in 2016.
- Director of Assessment and Evaluation Center at Turkish Military Academy in 2016.
- Member of Search Committee for faculty hiring at Turkish Military Academy between 2014 -2015.

SCHOLARSHIPS, HONORS, AWARDS & DEGREES

1. "Green supplier selection based on IFS and GRA" published in Grey Systems: Theory and Application has been selected by the journal's Editorial Team as a Highly Commended Paper of 2013.
2. Awarded Research Fellowship Program in Foreign Country After Ph.D. by The Scientific and Technological Research Council of Turkey (TUBITAK) in 2013.
3. Awarded a grant by Turkey Ministry of National Education in 1999.
4. University Graduation: Degree: 2nd in department, 1998.

PUBLICATIONS & SYMPOSIUMS

Peer Reviewed Journal Articles

1. **Gumus, S.**, Kucukvar, M., & Tatari, O. (2016). Intuitionistic Fuzzy Approach for Multi-Criteria Decision Analysis of Energy Systems. *Sustainable Production and Consumption*, 8, 78-92. (Elsevier).
2. Egilmez, G., **Gumus, S.**, Kucukvar, M., & Tatari, O. (2016). A Fuzzy Data Envelopment Analysis Framework for Dealing with Uncertainty Impacts of Input Output Life Cycle Assessment Models on eco-efficiency Assessment. *Journal of Cleaner Production*, (Elsevier), 129, August 15, 622-636 (Science Citation Index-Expanded).

3. Onat, N.C., **Gumus, S.**, Kucukvar, M., & Tatari, O. (2016). Application of TOPSIS and Intuitionistic Fuzzy Set Approach for Ranking the Life Cycle Sustainability. *Sustainable Production and Consumption (Elsevier)*, 6, 12-25.
4. **Gumus, S.**, Egilmez, G., Kucukvar, M. & Park, Y.S. (2015). Integrating Expert Weighting and Multi-Criteria Decision Making into Eco-6 efficiency Analysis: The Case of U.S. Manufacturing. *Journal of Operational Research Society*, 67, 616-628. doi:10.1057/jors.2015.88. (Science Citation Index)
5. Bali, O., Dagdeviren, M., & **Gumus, S.** (2015). An integrated dynamic intuitionistic fuzzy MADM approach for personnel promotion problem. *Kybernetes*, 44, 10. (Science Citation Index-Expanded)
6. Bali, O., **Gumus, S.** & Kaya, I. (2015). A Multi-Period Decision Making Procedure Based on Intuitionistic Fuzzy Sets for Selection Among Third-Party Logistics Providers. *Journal of Multiple Valued Logic and Soft Computing*, 24, Number 5-6, 547-569.
7. Egilmez, G., **Gumus, S.**, & Kucukvar, M. (2015). Environmental Sustainability Benchmarking of Canada Metropoles and US: A Multi-criteria Intuitionistic Fuzzy Decision Making Approach. *Cities (Elsevier)*, 42, Part A, 31-41. DOI: 10.1016/j.cities.2014.08.006. (Social Science Citation Index)
8. Sevim, C., Oztekin, A., Bali, O., **Gumus, S.** & Guresen, E. (2014). Developing an Early Warning System to Predict Currency Crises for Turkey. *European Journal of Operational Research (EJOR)*, 237, 3, 1095-1104. (Science Citation Index-Expanded), DOI: <http://dx.doi.org/10.1016/j.ejor.2014.02.047>
9. Sevim, C., Bali, O., **Gumus, S.** & Guresen, E. (2013). Developing an Early Warning System for Currency Crises in Turkey. *AWER Procedia Information Technology & Computer Science*, Vol 3, 509-515.
10. Bali, O., Kose, E. & **Gumus, S.** (2013). Green Supplier Selection Based on IFS and GRA. *Grey Systems: Theory and Application* 3, 2, 158-176.
11. Kucukvar, M., **Gumus, S.**, Egilmez, G., & Tatari, O. (2013). Ranking the Life Cycle Sustainability Performance of Pavements: A Multi-criteria Fuzzy Decision Making Approach. *Automation in Construction*, 40, 33-43. (Science Citation Index-Expanded)
12. Bali, O., & **Gumus, S.** (2013). Multi-terms MADM procedures with GRA and TOPSIS based on IFS and IVIFS. *Grey Systems: Theory and Application*, 40, 1, 164-185.
13. Bali, O., **Gumus, S.** & Dagdeviren, M. (2013). A group MADM method for personnel selection problem using Delphi technique based on intuitionistic fuzzy sets. *Journal of Military and Information Sciences*, 1, 1, 1-13.
14. **Gumus, S.**, Efe, H. & Yildiz, C. (2012). Some Results On T-Best Approximation in Fuzzy n- Normed Spaces. *Iranian Journal of Fuzzy Systems*, 9, 5, 137-146., (Science Citation Index Expanded)
15. Efe, H., **Gumus, S.** & Yildiz, C. (2010). On the Category of Intuitionistic Fuzzy Metric Space. *Journal of Computational Analysis and Applications*, 12, 2, 436- 443 (Science Citation Index Expanded)
16. **Gumus, S.**, & Yildiz, C. (2008). Some characterizations on Fuzzy Sheafs. *Sakarya University, Fen Edebiyat Dergisi*, Volume: 9.

17. **Gumus, S.** & Yildiz, C. (2008). On the Fuzzy Sheaf of the Groups Formed by Fuzzy Topological Groups. *International Journal of Contemporary Mathematical Sciences*, 3, 8, 371-381.
18. **Gumus, S.** & Yildiz, C. (2007). The Fuzzy Sheaf of the Groups Formed by Fuzzy Topological Groups over Pointed Fuzzy Topological Space. *International Journal of Pure and Applied Mathematics*, 37, 1, 101-112.

Peer Reviewed Journal Articles (Under Review)

1. **Gumus, S.**, & Egilmez, G., (2018). A Novel Intuitionistic Fuzzy MCDM Approach Based on Hamacher Norm and Statistical Analysis. *Expert Systems with Applications* (Under Review).
2. **Gumus, S.** (2018). A Generalized TOPSIS Method with Interval-Valued Intuitionistic Aggregation Operators. *International Journal of Industrial Engineering: Theory, Applications and Practice* (Under Review).
3. **Gumus, S.**, & Bali, O. (2018). Dynamic Intuitionistic Fuzzy Einstein Aggregation Operators and Their Application to Multiple Criteria Decision Making. *Fuzzy Information and Engineering* (Under Review).
4. **Gumus, S.** (2017). Induced Interval Valued Intuitionistic Fuzzy Hamacher OWA Operators for Multi Criteria Decision Making. *Science Journal of Turkish Military Academy* (Under Review).

CONFERENCE PROCEEDINGS

1. **Gumus, S.** (2015). Fuzzy Based Multi-Criteria Decision Making Methods for Sustainability Performance Assessment. *Big Data Analytics and Education Conference*, July 30-31, Istanbul, Turkey.
2. **Gumus, S.**, Egilmez, G., & Kucukvar, M. (2014). Ranking Sustainability Performance of the US and Canada Metropolises: An IF-MCDM Approach. *INFORMS Annual Meeting*, November 9-12, San Francisco, USA.
3. Atik, M., **Gumus, S.** & Köse, Y. (2014). Playing on the stock exchange or trading? Expected value theory, 2. *International Davraz Congress*, 29-31 May, Isparta, Turkey.
4. Ercan, T., & **Gumus, S.**, (2014). Sustainability Performance Analysis of Intelligent Transportation Systems: A Fuzzy-Data Envelopment Analysis Approach, *Engineering and Applied Sciences Optimization (OPT-i)*, 4-6 June, Kos Island, Greece.
5. **Gumus, S.**, (2014), Interval Valued Intuitionistic Fuzzy Hamacher Operators For Multiple Criteria Decision Making Algorithms, *13. Mathematic Symposium*, 239 pp., Karabuk, Turkey, 15-17 May.
6. Egilmez, G., **Gumus, S.**, & Kucukvar, M., (2013), "Sustainability Performance Assessment of U.S. Food Manufacturing: A Fuzzy Eco-efficiency Analysis", *INFORMS Annual Meeting*, October 6-9, 2013. Minneapolis, MN, USA.
7. Bali, O., Kose, E., **Gumus, S.** & Cin, Y. (2012), "A Hybrid Group MCDM Method Based on IFS and GRA for Green Supplier Selection", *X. International Logistics & Supply Chain Congress*, November 8-9. Istanbul, Turkey

8. Sevim, C., Bali, O., **Gumus, S.** & Guresen, E. (2012). Developing an Early Warning System for Currency Crises in Turkey, Third World Conference on Information Technology 2012, Barcelona, 14-16 November.
9. Bali, O., & **Gumus, S.** (2010). Selection of Teaching Staff Based on Intuitionistic Fuzzy Set Theory, YAEM 2010, 173-174 pp., Istanbul, Turkey, June 30- July 2.
10. **Gumus, S.**, & Bali, O. (2010). AHP Group Decision Making Method Based on Weighted of Decision Maker, YAEM 2010, 100-101 pp., Istanbul, Turkey, 30 June-2 July.
11. Efe, H., **Gumus, S.**, Alaca, C., & Yildiz, C. (2010). XXIII. Convergence in L-Fuzzy Metric Space, National Mathematic Symposium, 133 pp., Kayseri, Turkey, August
12. **Gumus, S.**, & Yildiz, C. (2007). II. Mathematic Symposium of Turkish World, Some Characterizations on Fuzzy Sheafs, 317 pp., Sakarya University.

SEMINARS

1. **Gumus, S.** (2014). Fuzzy Set Theory and its Applications in Decision Making Problems: Intuitionistic Fuzzy TOPSIS Example. Gazi University, May 23.
2. **Gumus, S.** (2014). Fuzzy Logic and its Applications. Turkish Military Academy,
3. **Gumus, S.** (2013). How to Deal with Editor and Referee Process. Turkish Military Academy.
4. **Gumus, S.** (2013). How to Write an Academic Article. Turkish Military Academy.
5. **Gumus, S.** (2013). Academic Ethic and Ithenticate. Turkish Military Academy.

REFERENCES

- **Professor Filiz Dogru**
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- **Associate Professor Gokhan Egilmez**
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