

CURRICULUM VITAE

1. **Name and surname:** Mehmet Alper TUNGA
2. **Date of birth:** 11/06/1975
3. **Academic title:** Assoc. Prof. Dr.
4. **Educational background:**

| Degree | Department/Programme | University | Year |
|----------|---------------------------------------|-------------------------------|------|
| Doctoral | Computational Science and Engineering | İstanbul Technical University | 2006 |
| Master | Systems Analysis | İstanbul Technical University | 1999 |
| Bachelor | Mathematics Engineering | İstanbul Technical University | 1997 |

5. Academic Positions:

| Position | Department | University | Year |
|-------------------|----------------------|-----------------------|------|
| Assoc. Prof. Dr. | Software Engineering | Bahçeşehir University | 2013 |
| Assist. Prof. Dr. | Software Engineering | Bahçeşehir University | 2007 |
| | | | |

6. Master and Doctoral Thesis Supervision:

6.1. Master Thesis Supervision

[1] Aybuke Doğan, “Establishing a Predictive Model for Individual Car Loans Exposing to Legal Procedure”, (in Turkish) September 2015.

[2] Ebubekir Sıddık Atar, “Making a Task Appointment and Follow System in a Workplace by Using Analytical Hierarchy Process”, (in Turkish) September 2015.

[3] Serap Solak Erkuş, “Cardiovascular Disease Prediction Using Data Mining Techniques”, (in Turkish) January 2015.

[4] Ersin Kuzu, “Investigation of GPU Use in Programming Computational Based Algorithms”, (in Turkish) Eylül 2014.

[5] Ozan Dikerler, “The Usage Methods of Social Media Platforms in the Health Sector and a Related Research in Turkey”, (in Turkish) January 2014.

[6] Yasemin Aktürk, “What is the Model of the Best Manager? A Data Mining Approach”, Eylül 2013.

[7] Selçuk Döven, “Finding Similarities Between Documents Using Text Mining Techniques”, (in Turkish) June 2013.

[8] Nuri Kahraman, “Behaviors of E-Commerce Users via Data Mining Methods”, (in Turkish) June 2013.

[9] Çağrı Aksu, “Data Modelling with Indexing High Dimensional Model Representation Method”, (in Turkish) June 2011.

[10] Ahmet Tiryaki, "Development of a Software for Implementing Internet Based Education of Management Skills in Vocational and Technical School", (in Turkish) June 2011.

[11] C. Ufuk Baytar, "What is WEB 2.0 and its Effects on Web Design", (in Turkish) January 2011.

[12] Murat Yalman, "University Students' Computer and WWW (World Wide Web) by the Perception of some Variables to be Examined: The Case of Turkey", (in Turkish) August 2010.

6.2. Doctoral Thesis Supervision

7. Publications

7.1. Papers Published in Peer Reviewed International Journals (SCI & SSCI & Arts and Humanities)

[1] S. Aydın, S. Demirtaş, **M. A. Tunga** and K. Ateş, "Emotion Recognition with Eigen Features of Frequency Band Activities Embedded in Induced Brain Oscillations Mediated by Affective Pictures", *International Journal of Neural Systems*, DOI: 10.1142/S0129065716500131, 2016.

[2] **M. A. Tunga**, "A New Approach for Multivariate Data Modelling in Orthogonal Geometry", *International Journal of Computer Mathematics*, 92(9), 2011-2021, 2015.

[3] S. Aydın, **M. A. Tunga** and S. Yetkin, "Mutual Information Analysis of Sleep EEG in Detecting Psycho-Physiological Insomnia", *Journal of Medical Systems*, 39(5):43, 1-10, 2015.

[4] A. Karahoca and **M. A. Tunga**, "A Polynomial Based Algorithm for Detection of Embolism", *Soft Computing*, 19(1), 167-177, 2015.

[5] **M. A. Tunga** and A. Karahoca, "Detecting GSM Churners by Using Euclidean Indexing HDMM", *Applied Soft Computing*, 27, 38-46, 2015.

[6] M. Yalman and **M. A. Tunga**, "Examining the Attitudes of Students from State and Foundation Universities in Turkey Towards the Computer and WWW (World Wide Web)", *Education and Science*, 39(173), 221-233, 2014.

[7] **M. A. Tunga** and M. Demiralp, "A Novel Method for Multivariate Data Modelling: Piecewise Generalized EMPR", *Journal of Mathematical Chemistry*, 51(10), 2654-2667, 2013.

[8] **M. A. Tunga**, "Factorized Form of Indexing HDMM Method for Multivariate Data Modelling", *Mathematical and Computer Modelling*, 57(5-6), 1325-1334, 2013.

[9] **M. A. Tunga** and M. Demiralp, "Multivariate Data Modelling Through Piecewise Generalized HDMM Method", *Journal of Mathematical Chemistry*, 50(7), 1711-1726, 2012.

[10] A. Karahoca and **M. A. Tunga**, "Dosage Planning for Type 2 Diabetes Mellitus Patients Using Indexing HDMR", *Expert Systems with Applications*, 39(8), 7207-7215, 2012.

[11] **M. A. Tunga**, "A Matrix Based Indexing HDMR Method for Multivariate Data Modelling", *Journal of Mathematical Chemistry*, 49(5), 1092-1114, 2011.

[12] **M. A. Tunga**, "An Approximation Method to Model Multivariate Interpolation Problems: Indexing HDMR", *Mathematical and Computer Modelling*, 53(9-10), 1970-1982, 2011.

[13] **M. A. Tunga** and M. Demiralp, "Bound Analysis in Univariately Truncated Generalized High Dimensional Model Representation for Random-Data Partitioning: Interval GHDMR", *Applied Numerical Mathematics*, 59(6), 1431-1448, 2009.

[14] **M. A. Tunga** and M. Demiralp, "A New Approach for Data Partitioning Through High Dimensional Model Representation", *Int. Journal of Computer Mathematics*, 85(12), 1779-1792, 2008.

[15] **M. A. Tunga** and M. Demiralp, "Hybrid High Dimensional Model Representation (HHDMR) on the Partitioned Data", *Journal of Computational and Applied Mathematics*, 185(1), 107-132, 2006.

[16] **M. A. Tunga** and M. Demiralp, "A Factorized High Dimensional Model Representation on the Nodes of a Finite Hyperprismatic Regular Grid", *Applied Mathematics and Computation*, 164(3), 865-883, 2005.

7.2. Papers Published in other Peer Reviewed International Journals

[1] M. Yalman and **M. A. Tunga**, "Examining University Students' Perceptions of Computer and WWW (World Wide Web) with respect to Certain Variables: A Case from Turkey", *International Journal of Science, Innovation and New Technology*, 1(6), 1-9, 2013.

[2] **M. A. Tunga** and M. Demiralp, "Bound Analysis Through HDMR for Multivariate Data Modelling", *Journal of Mathematical Modelling and Algorithms*, 12(3), 213-218, 2013.

[3] **M. A. Tunga** and M. Demiralp, "A Reverse Technique for Lumping High Dimensional Model Representation Method", *WSEAS Transactions on Mathematics*, 8(5), 213-218, 2009.

[4] **M. A. Tunga** and M. Demiralp, "A Factorized High Dimensional Model Representation on the Partitioned Random Discrete Data", *Appl. Num. Anal. Comp. Math.*, 1(1), 231-241, 2004.

[5] **M. A. Tunga** and M. Demiralp, "Data Partitioning via Generalized High Dimensional Model Representation (GHDMR) and Multivariate Interpolative Applications", *Mathematical Research*, 9, 447-462, 2003.

[6] E. Demiralp and **M. A. Tunga**, "A Hybrid Programming for Projective Displaying of High Dimensional Model Representation Approximants", *Mathematical Research*, 9, 132-145, 2003.

7.3. Papers both Presented At International Scientific Conferences and published in their Proceedings

[1] **M. A. Tunga**, "Constant Indexing EMPR Approximation in Multivariate Data Modelling", 15th International Conference on Computational and Mathematical Methods in Science and Engineering (CMMSE 2015), 1094-1103, July 6-10, 2015, Rota, Cadiz, Spain.

[2] Ç. Aksu and **M. A. Tunga**, "Various Forms of Indexing HDMR for Modelling Multivariate Classification Problems", ICNPAA 2014 World Congress: 10th International Conference on Mathematical Problems in Engineering, Aerospace and Sciences (July 15-18, 2014, Narvik, Norway), AIP Conference Proceedings 1637, 18-25, 2014.

[3] R. Bidar, M. B. Fard, Y. B. Salman, **M. A. Tunga**, H. Cheng, "Factors Affecting the Adoption of Mobile Banking: Sample of Turkey", 16th International Conference on Advanced Communication Technology (ICACT 2014), 1278-1282, February 16-19, 2014, Pyeongchang, South Korea.

[4] **M. A. Tunga** and M. Demiralp, "Multivariate Data Modelling Through EMPR in Orthogonal Geometry", 13th International Conference on Computational and Mathematical Methods in Science and Engineering (CMMSE 2013), 1342-1349, June 24-27, 2013, Almeria, Spain.

[5] **M. A. Tunga** and M. Demiralp, "A Factorized Novel Bound Analysis For Multivariate Data Modelling: Interval Factorized HDMR", 12th International Conference on Computational and Mathematical Methods in Science and Engineering (CMMSE 2012), 1173-1185, July 2-5, 2012, La Manga, Spain.

[6] **M. A. Tunga** and M. Demiralp, "Bound Analysis in Univariately Truncated Factorized HDMR for a Multivariate Function Given at the Nodes of an Hypergrid", 12th WSEAS International Conference on Systems Theory and Scientific Computation (ISTASC 2012), 208-212, August 21-23, 2012, Istanbul, Turkey.

[7] **M. A. Tunga** and M. Demiralp, "Generalized Enhanced Multivariate Product Representation for Data Partitioning: Constancy Level", 9th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2011 - September, 19-25, 2011, Halkidiki, Greece), AIP Conf. Proc. 1389, 1152-1155, 2011.

[8] **M. A. Tunga** and M. Demiralp, "Data Partitioning Through Piecewise Based Generalized HDMR: Univariate Case", The 2nd International Symposium on Computing in Science & Engineering (ISCSE 2011), 1194-1199, June, 1-4, 2011, Kusadasi, Aydin, Turkey.

- [9] **M. A. Tunga** and M. Demiralp, "Fluctuation Free Matrix Representation Based HDMR Method to Model Multivariate Data", International Conference on Applied Computer Science (ACS 2010), 240-246, September 15-17, 2010, Malta.
- [10] **M. A. Tunga**, "An Indexing Based Approximation Method for Multivariate Interpolation Problems", The 1st International Symposium on Computing in Science & Engineering (ISCSE 2010), 56-60, June, 3-5, 2010, Kusadasi, Aydin, Turkey.
- [11] **M. A. Tunga** and M. Demiralp, "Fluctuation Free Matrix Representation Based Random Data Partitioning Through HDMR", AIP Proceedings of Seventh International Conference of Computational Methods in Sciences and Engineering (ICCMSE '09 - Sept 29-Oct 04, 2009, Rhodes, Greece), AIP Conf. Proc. 1504, 792-795, 2012.
- [12] **M. A. Tunga** and M. Demiralp, "A Reverse Technique for Lumping High Dimensional Model Representation Method", 2nd WSEAS International Conference on Multivariate Analysis and its Application in Science and Engineering (MAASE '09), 101-106, May 30-June 01, 2009, Istanbul, Turkey.
- [13] **M. A. Tunga** and M. Demiralp, "Introductory Steps for an Indexing Based HDMR Algorithm: Lumping HDMR", 1st WSEAS International Conference on Multivariate Analysis and its Application in Science and Engineering, 129-135, May 27-30, 2008, Istanbul, Turkey.
- [14] **M. A. Tunga** and M. Demiralp, "Computational Complexity Investigations for High Dimensional Model Representation Algorithms Used in Multivariate Interpolation Problems", 12th WSEAS International Conference on Applied Mathematics, Applied Mathematics for Science and Engineering, 133-139, December 29-31, 2007, Cairo, Egypt.
- [15] **M. A. Tunga** and M. Demiralp, "Error Propagation Through Generalized High Dimensional Model Representation for Data Partitioning", International Conference on Numerical Analysis and Applied Mathematics, 406-409, September 10-14, 2004, Chalkis, Greece.
- [16] E. Demiralp and **M. A. Tunga**, "A Hybrid Programming for Projective Displaying of High Dimensional Model Representation Approximants", The Fourth International Conference on Tools for Mathematical Modelling, 48, June 23-28, 2003, Saint-Petersburg, Russia.
- [17] **M. A. Tunga** and M. Demiralp, "Data Partitioning via Generalized High Dimensional Model Representation (GHDMR) and Multivariate Interpolative Applications", The Fourth International Conference on Tools for Mathematical Modelling, 142, June 23-28, 2003, Saint-Petersburg, Russia.
- [18] **M. A. Tunga** and M. Demiralp, "A Factorized High Dimensional Model Representation on the Partitioned Random Discrete Data", International Conference on Numerical Analysis & Computational Mathematics (NACOM-2003), 162-165, May 23-26, 2003, Cambridge, England.

[19] **M. A. Tunga**, M. Demiralp and M. Yanalak, "A High Dimensional Model Representation Based on Lagrange Interpolation for Digital Elevation Models", International Symposium on GIS, 687-696, September 23-26, 2002, Istanbul, Turkey.

[20] **M. A. Tunga** and M. Demiralp, "A High Dimensional Model Representation Based Approximation Scheme for Multivariate Interpolation", International Symposium on GIS, 678-686, September 23-26, 2002, Istanbul, Turkey.

[21] **M. Demiralp** and M. A. Tunga, "High Dimensional Model Representation of Multivariate Interpolation via Hypergrids", The Sixteenth International Symposium on Computer and Information Sciences, 416-423, November 5-7, 2001, Antalya, Turkey.

7.4. International Books or Book Chapters

[1] **M. A. Tunga**, M. Demiralp "Computational complexity investigations for high dimensional model representation algorithms used in multivariate interpolation problems", Advances in Numerical Methods, Vol.11 - Part 1, Chapter 2, 15-29, Springer, 2009.

7.5. Papers Published in Peer Reviewed National Journals

[1] M. Yalman ve **M. A. Tunga** , "University Students Perceptions of Computer Experience With Computer Analysis of Some Variables: Case of Dicle University", *Dicle Üniversitesi Ziya Gökalp Eğitim Fakültesi Dergisi*, 18, 168-188, 2012.

7.6. Papers both Presented At National Scientific Conferences and published in their Proceedings

[1] M. Demiralp, **M. A. Tunga**, "High Dimensional Model Representation and Factorized High Dimensional Model Representation in Multivariate Interpolation", XII. Ulusal Mekanik Kongresi, 277-285, 10-14 September 2001, Konya, Turkey.

[2] M. Demiralp, **M. A. Tunga**, "High Dimensional Model Representation: An Exponential Function with Linear Argument over Semi Infinite Hyper Space", XII. Ulusal Mekanik Kongresi, 287-295, 10-14 September 2001, Konya, Turkey.

7.7. Other Publications

7.8. International Citations:

114 (2007 – 4, 2008 – 6, 2009 – 14, 2010 – 13, 2011 – 22, 2012 – 21, 2013 – 10, 2014 – 9, 2015 – 15)

8. Projects participated:

| City | Date | Project Name and Description | Position |
|----------|----------------------------|--|------------------------|
| İstanbul | 01/08/2015 – 01/04/2017 | Digital Image Inpainting Using High Dimensional Model Representation Based Methods | Principal Investigator |

9. Administrative Positions (Responsibilities):

| Position | Department | University | Year |
|-------------|--|-----------------------|------------|
| Coordinator | Information Technologies Master Programme | Bahçeşehir University | Feb 2010 – |

10. Memberships In Scientific Societies And Professional Organizations:

11. Awards and Honors:

12. Post-graduate and Graduate courses conducted within two years:

Post-graduate courses:

| Academic Year | Semestre | Course Name | Weekly Hours | | Enrollment |
|------------------|------------------|---|--------------|--------------------|------------|
| | | | Theory | Problem Session | |
| 2013-2014 | Fall | Software Engineering Analysis and Design | 3 | 0 | 121 |
| | | Multivariate Data Analysis | 3 | 0 | 15 |
| | Spring | Software Engineering Analysis and Design | 3 | 0 | 16 |
| | | Software Measurement and Testing | 3 | 0 | 69 |
| | Unix Programming | 3 | 0 | 28 | |
| 2014-2015 | Fall | Software Engineering Analysis and Design | 3 | 0 | 123 |
| | | Software Measurement and Testing | 3 | 0 | 49 |
| | Spring | Software Engineering Analysis and Design | 3 | 0 | 156 |
| | | Unix Programming | 3 | 0 | 23 |
| 2015-2016 | Fall | Software Engineering Analysis and Design | 3 | 0 | 101 |

Graduate courses:

| Academic Year | Semestre | Course Name | Weekly Hours | | Enrollment |
|----------------------|-----------------|---|---------------------|------------------------|-------------------|
| | | | Theory | Problem Session | |
| 2013-2014 | Fall | Veri Modelleme ve İlişkisel Veritabanları | 3 | 0 | 23 |
| | Spring | PL/SQL ile Veritabanı Programlama | 3 | 0 | 18 |
| 2014-2015 | Fall | Veri Modelleme ve İlişkisel Veritabanları | 3 | 0 | 19 |
| | Spring | PL/SQL ile Veritabanı Programlama | 3 | 0 | 12 |
| 2015-2016 | Fall | Veri Modelleme ve İlişkisel Veritabanları | 3 | 0 | 34 |