

## EVRIM ACAR (ATAMAN)

Simula Metropolitan Center for  
Digital Engineering  
Pilestredet 52, Oslo, Norway  
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<https://www.simula.no/people/evrim>

### Research Interests

- Data mining, multi-modal data mining, matrix/tensor factorizations.
- Applications of matrix/tensor factorizations in chemometrics, omics, neuroimaging data analysis, and social network analysis.

### Education

- Ph.D., Computer Science, Rensselaer Polytechnic Institute, Troy, New York, May 2008  
Dissertation: Understanding Epilepsy Seizure Structure Using Tensor Analysis
- M.S., Computer Science, Rensselaer Polytechnic Institute, Troy, New York, December 2006  
Dissertation: Chatroom Communication Analysis Using Tensor Decompositions
- B.S., Computer Engineering, Bogazici University, Istanbul, Turkey, July 2003

### Current Positions

- Chief Research Scientist (January 2019 - ...), [Simula Metropolitan Center for Digital Engineering \(SimulaMet\)](#), Oslo, Norway
  - Senior Research Scientist (January - December 2018), SimulaMet, Oslo, Norway
- Head of [Data Science and Knowledge Discovery Department](#), SimulaMet, Oslo, Norway
- Affiliated Associate Professor (April 2019 - ...), [Chemometrics and Analytical Technology](#), Faculty of Science, University of Copenhagen, Denmark

### Previous Positions

- Assistant Professor (March 2012 - 2017), [Chemometrics and Analytical Technology](#), Faculty of Science, University of Copenhagen, Denmark
  - Visiting Scholar (April - June 2013), [Institute for Computational and Mathematical Engineering \(ICME\)](#), Stanford University, California
  - Postdoctoral Researcher (March 2011 - February 2012), [Spectroscopy and Chemometrics](#), Faculty of Science, University of Copenhagen, Denmark
- Senior Research Scientist (April 2010 - February 2011), [National Research Institute of Electronics and Cryptology \(TUBITAK-BILGEM\)](#), Gebze, Turkey
- Postdoctoral Researcher (June 2008 - November 2009), Computational Sciences and Mathematics Research Department, [Sandia National Laboratories](#), Livermore, California
- Research/Teaching Assistant (August 2003 - May 2008), [Computer Science Department](#), Rensselaer Polytechnic Institute (RPI), Troy, New York
  - Visiting Researcher (Summers 2006 & 2007), [Spectroscopy and Chemometrics](#), Faculty of Science, University of Copenhagen, Denmark

### Honors and Awards

- The Danish Council for Independent Research Sapere Aude Young Elite Researcher, 2012

### Research Projects

- PI, [Time-aware Constrained Multi-modal Data Fusion](#), funded by the Research Council of Norway, 2020 - 2024
- co-PI, [Time-aware Constrained Multi-modal Data Fusion - Metabolic Network Evolution](#), funded by the Novo Nordisk Foundation, 2020 - 2022
- co-PI, Data-driven Framework for Personalized Cancer Screening, funded by the Research Council of Norway, 2019 - 2023
- PI, Multi-modal Neuroimaging Data Fusion, funded by Simula Metropolitan Center for Digital Engineering, Oslo, Norway, 2018 - 2022
- PI, [Joint Data Analysis for Enhanced Knowledge Discovery in Metabolomics](#), funded by the Danish Council for Independent Research - Technology and Production Sciences, 2012 - 2016

### Supervision

- Main supervisor of four PhD students (SimulaMet, Norway - ongoing)
- Main supervisor of two postdoctoral researchers (SimulaMet, Norway - ongoing), co-supervision of three postdocs (one ongoing, two completed)
- 2011- present: Co-supervisor of several MS students (SimulaMet, Norway; Bogazici University, Turkey)

### Publication Summary

32 peer-reviewed journal articles, 22 peer-reviewed conference proceedings, 1 book chapter, 3 submitted papers (Google Scholar Citations: 5044 Citations as of January 2023, h-index: 30)

### Journal Articles

34. L. Li, S. Yan, B. M. Bakker, H. Hoefsloot, B. Chawes, D. Horner, M. A. Rasmussen, A. K. Smilde, E. Acar. [Analyzing postprandial metabolomics data using multiway models: A simulation study](#). bioRxiv, 2022
33. F. Becker, A. K. Smilde, E. Acar. [Unsupervised EHR-based Phenotyping via Matrix and Tensor Decompositions](#). arXiv:2209.00322, 2022
32. M. Fida, M. Roald, E. Acar and A. Elmokashfi. [Modeling Variation in Mobile Download Speed in Presence of Missing Samples](#). IEEE Transactions on Mobile Computing, in press.
31. M. Roald, C. Schenker, V. D. Calhoun, T. Adali, R. Bro, J. E. Cohen, E. Acar. [An AO-ADMM approach to constraining PARAFAC2 on all modes](#). SIAM Journal on Mathematics of Data Science, 4(3): 1191-1222, 2022
30. T. Adali, F. Kantar, M. A. B. S. Akhonda, S. Strother, V. D. Calhoun, E. Acar. [Reproducibility in Matrix and Tensor Decompositions: Focus on Model Match, Interpretability, and Uniqueness](#). IEEE Signal Processing Magazine, 39(4): 8-24, 2022
29. E. Acar, M. Roald, K. M. Hossain, V. D. Calhoun, T. Adali. [Tracing Evolving Networks using Tensor Factorizations vs. ICA-based Approaches](#). Frontiers in Neuroscience, 16: 861402, 2022
28. L. Li, H. Hoefsloot, A. A. de Graaf, E. Acar, A. K. Smilde. [Exploring Dynamic Metabolomics Data with Multiway Data Analysis: a Simulation Study](#). BMC Bioinformatics, 23, 31, 2022
27. C. Schenker, J. E. Cohen, E. Acar. [A Flexible Optimization Framework for Regularized Matrix-Tensor Factorizations with Linear Couplings](#). IEEE Journal of Selected Topics in Signal Processing, 15 (3), 2021
26. J. Geddes, G. T. Einevoll, E. Acar, A. J. Stasik. [Multi-Linear Population Analysis \(MLPA\) of LFP data using Tensor Decompositions](#). Frontiers in Applied Mathematics and Statistics, 2020

25. J. Camacho, E. Acar, M. A. Rasmussen, R. Bro. [Cross-product penalized component analysis \(X-CAN\)](#) *Chemometrics and Intelligent Laboratory Systems*, 203: 104038, 2020
24. E. Acar, C. Schenker, Y. Levin-Schwartz, V. D. Calhoun and T. Adali. [Unraveling Diagnostic Biomarkers of Schizophrenia through Structure-Revealing Fusion of Multi-Modal Neuroimaging Data](#) *Frontiers in Neuroscience*, 13:416, 2019
23. E. Acar, G. Gürdeniz, B. Khakimov, F. Savorani, S. K. Korndal, T. M. Larsen, S. B. Engelsen, A. Astrup, L. O. Dragsted. [Biomarkers of individual foods, and separation of diets using untargeted LC-MS based plasma metabolomics in a randomized controlled trial.](#) *Molecular Nutrition and Food Research*, 63: 1800215, 2019
22. U. Wünsch, E. Acar, B. P. Koch, K. R. Murphy, P. Schmitt-Kopplin, C. A. Stedmon. [The molecular fingerprint of fluorescent natural organic matter offers insight into its diagenetic state.](#) *Analytical Chemistry*, 90(24): 14188-14197, 2018
21. E. Acar, G. Gürdeniz, F. Savorani, L. Hansen, A. Olsen, A. Tjønneland, L. O. Dragsted and R. Bro. [Forecasting Chronic Diseases using Data Fusion.](#) *Journal of Proteome Research*, 16(7):2435-2444, 2017
20. A. K. Smilde, I. Mage, T. Næs, T. Hankemeier, M. A. Lips, H. A. L. Kiers, E. Acar and R. Bro. [Common and Distinct Components in Data Fusion.](#) *Journal of Chemometrics*, 31:e2900, 2017
19. B. Khakimov, S. K. Poulsen, F. Savorani, E. Acar, G. Gürdeniz, T. M. Larsen, A. Astrup, L. O. Dragsted and S. B. Engelsen. [New Nordic diet versus average Danish diet: a randomized controlled trial revealed healthy long-term effects of the new Nordic diet by GC-MS blood plasma metabolomics.](#) *Journal of Proteome Research*, 15(6):1939-1954, 2016
18. E. Acar, R. Bro and A. K. Smilde. [Data Fusion in Metabolomics using Coupled Matrix and Tensor Factorizations.](#) *Proceedings of the IEEE*, 103:1602-1620, 2015
17. J. Escudero, E. Acar, A. Fernández and R. Bro. [Multiscale Entropy Analysis of Resting-State Magnetoencephalogram with Tensor Factorisations in Alzheimer's Disease.](#) *Brain Research Bulletin*, 119:136-144, 2015
16. B. Ermiş, E. Acar and A. T. Cemgil. [Link Prediction in Heterogeneous Data via Generalized Coupled Tensor Factorization.](#) *Data Mining and Knowledge Discovery*, 29:203-236, 2015
15. E. Acar, E. E. Papalexakis, G. Gürdeniz, M. A. Rasmussen, A. J. Lawaetz, M. Nilsson and R. Bro. [Structure-Revealing Data Fusion.](#) *BMC Bioinformatics*, 15:239, 2014
14. E. Acar, M. A. Rasmussen, F. Savorani, T. Næs and R. Bro. [Understanding Data Fusion within the Framework of Coupled Matrix and Tensor Factorizations.](#) *Chemometrics and Intelligent Laboratory Systems*, 129:53-63, 2013
13. G. Gürdeniz, L. Hansen, M. A. Rasmussen, E. Acar, A. Olsen, J. Christensen, T. Barri, A. Tjønneland and L. O. Dragsted. [Patterns of Time Since Last Meal Revealed by Sparse PCA in an Observational LC-MS based Metabolomics Study.](#) *Metabolomics*, 9:1073-1081, 2013
12. E. Acar, G. Gürdeniz, M. A. Rasmussen, D. Rago, L. O. Dragsted and R. Bro. [Coupled Matrix Factorization with Sparse Factors to Identify Potential Biomarkers in Metabolomics.](#) *International Journal of Knowledge Discovery in Bioinformatics*, 3:22-43, 2012
11. R. Bro, E. E. Papalexakis, E. Acar and N. D. Sidiropoulos. [Coclustering - a Useful Tool for Chemometrics.](#) *Journal of Chemometrics*, 26:256-263, 2012
10. E. Acar, G. E. Plopper and B. Yener. [Coupled Analysis of in Vitro and Histology Tissue Samples to Quantify Structure-Function Relationship.](#) *PLoS One*, 7(3):e32227, 2012

9. E. Acar, D. M. Dunlavy, T. G. Kolda and M. Mørup. [Scalable Tensor Factorizations for Incomplete Data](#). *Chemometrics and Intelligent Laboratory Systems*, 106:41-56, 2011
8. D. M. Dunlavy, T. G. Kolda and E. Acar. [Temporal Link Prediction Using Matrix and Tensor Factorizations](#). *ACM Transactions on Knowledge Discovery from Data*, 5(2), Article 10, 2011
7. E. Acar, D. M. Dunlavy and T. G. Kolda. [A Scalable Optimization Approach for Fitting Canonical Tensor Decompositions](#). *Journal of Chemometrics*, 25:67-86, 2011
6. E. Acar and B. Yener. [Unsupervised Multiway Data Analysis: A Literature Survey](#). *IEEE Transactions on Knowledge and Data Engineering*, 21:6-20, 2009
5. R. Bro, E. Acar and T. G. Kolda. [Resolving the Sign Ambiguity in the Singular Value Decomposition](#). *Journal of Chemometrics*, 22:135-140, 2008
4. E. Acar, R. Bro and B. Schmidt. [New Exploratory Clustering Tool](#). *Journal of Chemometrics*, 22:91-100, 2008
3. B. Yener, E. Acar, P. Aguis, K. P. Bennett, S. L. Vandenberg and G. E. Plopper. [Multiway Modeling and Analysis in Stem Cell Systems Biology](#). *BMC Systems Biology*, 2:63, 2008
2. K. P. Bennett, C. Bergeron, E. Acar, R. F. Klees, S. L. Vandenberg, B. Yener and G. E. Plopper. [Proteomics Reveals Multiple Routes to the Osteogenic Phenotype in Mesenchymal Stem Cells](#). *BMC Genomics*, 8:380, 2007
1. E. Acar, C. A. Bingöl, H. Bingöl, R. Bro and B. Yener. [Multiway Analysis of Epilepsy Tensors](#). *Bioinformatics*, 23(13): i10-i18, 2007

#### Books/Book Chapters

1. G. Tomasi, E. Acar, R. Bro. [Multilinear Models, Iterative Methods](#). *Comprehensive Chemometrics (Second Edition)*, pp. 267-304, 2020

#### Conference/Workshop Articles

23. C. Schenker, X. Wang, E. Acar. [PARAFAC2-based Coupled Matrix and Tensor Factorizations](#). arXiv:2210.13054, 2022
22. I. Lehmann, E. Acar, T. Hasija, M.A.B.S. Akhonda, V. D. Calhoun, P. J. Schreier, T. Adali. [Multi-task fMRI Data Fusion using IVA and PARAFAC2](#). In *ICASSP 2022: Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing*, pp. 1466-1470, 2022
21. F. Becker, M. Nygard, J. Nygard, A. K. Smilde, E. Acar. *Phenotyping of Cervical Cancer Risk Groups via Generalized Low-Rank Models using Medical Questionnaires*. *Proceedings of the Symposium of the Norwegian AI Society*, 2022
20. M. Roald, C. Schenker, J. E. Cohen, E. Acar. [PARAFAC2 AO-ADMM: Constraints in all modes](#). In *EUSIPCO 2021: Proceedings of the 29th European Signal Processing Conference*, pp. 1040-1044, 2021
19. C. Schenker, J. E. Cohen, E. Acar. [An optimization framework for regularized linearly coupled matrix-tensor factorization](#). In *EUSIPCO 2020: Proceedings of the 28th European Signal Processing Conference*, pp. 985-989, 2021
18. M. Roald, S. Bhinge, C. Jia, V. Calhoun, T. Adali, E. Acar. [Tracing Network Evolution using the Parafac2 Model](#). In *ICASSP 2020: Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing*, pp. 1100-1104, 2020

17. M.-R. Fida, E. Acar, and A. Elmokashfi. [Multiway Reliability Analysis of Mobile Broadband Networks](#). In ACM IMC 2019: Proceedings of the ACM Internet Measurement Conference, pp. 358–364, 2019
16. E. Acar, Y. Levin-Schwartz, V. D. Calhoun and T. Adali. [ACMTF for Fusion of Multi-Modal Neuroimaging Data and Identification of Biomarkers](#). In EUSIPCO 2017: Proceedings of the 25th European Signal Processing Conference, pp. 643-647, 2017
15. E. Acar, Y. Levin-Schwartz, V. D. Calhoun and T. Adali. [Tensor-Based Fusion of EEG and fMRI to Understand Neurological Changes in Schizophrenia](#). In IEEE ISCAS 2017: Proceedings of the 50th Annual International Symposium on Circuits and Systems, pp. 314-317, 2017
14. E. Acar, M. Nilsson and M. Saunders. [A Flexible Modeling Framework for Coupled Matrix and Tensor Factorizations](#). In EUSIPCO 2014: Proceedings of the 22nd European Signal Processing Conference, pp. 111-115, 2014
13. W. Swinnen, B. Hunyadi, E. Acar, S. Van Huffel and M. De Vos. [Incorporating Higher Dimensionality in Joint Decomposition of EEG and fMRI](#). In EUSIPCO 2014: Proceedings of the 22nd European Signal Processing Conference, pp. 121-125, 2014
12. U. Şimşekli, B. Ermiş, A. T. Cemgil and E. Acar. [Optimal Weight Learning For Coupled Tensor Factorization with Mixed Divergences](#). In EUSIPCO 2013: Proceedings of the 21st European Signal Processing Conference, pp. 1-5, 2013
11. E. Acar, A. J. Lawaetz, M. A. Rasmussen and R. Bro. [Structure-Revealing Data Fusion Model with Applications in Metabolomics](#). In IEEE EMBS 2013: Proceedings of the 35th International Conference of IEEE Engineering in Medicine and Biology Society, pp. 6023-6026, 2013
10. E. Acar, G. Lozanski and M. N. Gürcan. [Tensor-based Computation and Modeling in Multi-Resolution Digital Pathology Imaging: Application to Follicular Lymphoma Grading](#). In Proceedings of SPIE 8676, Medical Imaging 2013: Digital Pathology, 867603, 2013
9. E. Acar, G. Gürdeniz, M. A. Rasmussen, D. Rago, L. O. Dragsted and R. Bro. [Coupled Matrix Factorization with Sparse Factors to Identify Potential Biomarkers in Metabolomics](#). In ICDM 2012 Workshop Proceedings for the 3rd Workshop on Biological Data Mining and Its Applications in Healthcare, pp. 1-8, 2012
8. B. Ermiş, E. Acar and A. T. Cemgil. [Link Prediction via Generalized Coupled Tensor Factorisation](#). ECML/PKDD Workshop on Collective Learning and Inference on Structured Data, 2012
7. E. Acar, T. G. Kolda and D. M. Dunlavy. [All-at-once Optimization for Coupled Matrix and Tensor Factorizations](#). KDD Workshop on Mining and Learning with Graphs, 2011
6. E. Acar, D. M. Dunlavy, T. G. Kolda and M. Mørup. [Scalable Tensor Factorizations with Missing Data](#). In SDM 2010: Proceedings of the 10th SIAM International Conference on Data Mining, pp. 701-712, 2010
5. E. Acar, D. M. Dunlavy and T. G. Kolda. [Link Prediction on Evolving Data using Matrix and Tensor Factorizations](#). In ICDM 2009 Workshop Proceedings for the 1st Workshop on Large-Scale Data Mining: Theory and Applications, pp. 262-269, 2009
4. E. Acar, C. A. Bingöl, H. Bingöl, R. Bro and B. Yener. [Seizure Recognition on Epilepsy Feature Tensor](#). In IEEE EMBS 2007: Proceedings of the 29th International Conference of IEEE Engineering in Medicine and Biology Society, pp. 4273-4276, 2007

3. E. Acar, C. A. Bingöl, H. Bingöl and B. Yener. [Computational Analysis of Epileptic Focus Localization](#). In BIOMED 2006: Proceedings of the 24th IASTED International Conference on Biomedical Engineering, pp. 317-322, 2006
2. E. Acar, S. A. Çamtepe and B. Yener. [Collective Sampling and Analysis of High-order Tensors for Chatroom Communications](#). In ISI 2006: Proceedings of IEEE International Conference on Intelligence and Security Informatics, pp. 213-224, 2006
1. E. Acar, S. A. Çamtepe, M. S. Krishnamoorthy and B. Yener [Modeling and Multiway Analysis of Chatroom Tensors](#). In ISI 2005: Proceedings of IEEE International Conference on Intelligence and Security Informatics, pp. 256-268, 2005

## Conference, Workshop &amp; Seminar Presentations

75. Invited Speaker, IPAM Workshop “Explainable AI for the Sciences: Towards Novel Insights”, UCLA, CA (Virtual), January 9-13, 2023.
74. Invited Seminar, Swammerdam Institute for Life Sciences (SILS) Data Science Symposium, Amsterdam, Netherlands, December 5, 2022.
73. Invited Seminar, BigInsight Seminar, University of Oslo, Oslo, Norway, November 9, 2022.
72. Invited Minisymp. Talk, [SIAM Conf. Mathematics of Data Science](#), (Virtual), Sept 26-30, 2022.
71. Three-way Methods in Chemistry and Psychology, (Virtual), June 27, 2022.
70. Asilomar Conference on Signals, Systems, and Computers, (Virtual), Oct. 31 - Nov. 3, 2021.
69. Invited Seminar, Nordic Probabilistic AI Summer School, (Virtual), June 16, 2021.
68. Invited Seminar, Tufts Tripods Seminar, Tufts University, Boston, MA (Virtual), November 13, 2020.
67. Invited Speaker, AI and Tensor Factorizations for Physical, Chemical, and Biological Systems, Santa Fe, NM, September 17-20, 2019.
66. Invited Seminar, Nofima, Ås, Norway, August 28, 2019.
65. Keynote, [KDD Workshop on Tensor Methods for Emerging Data Science Challenges](#), Anchorage, Alaska, August 5, 2019.
64. Invited Seminar, Max Planck Institute, Magdeburg, Germany, July 25, 2019.
63. Invited Paper, [IEEE Eng. in Medicine and Biology Society](#), Berlin, Germany, July 23-27, 2019.
62. Invited Speaker, 13th International Symposium on Medical Information and Communication Technology, Oslo, Norway, May 8-10, 2019.
61. Invited Seminar, University of Oslo, Oslo, Norway, March 14, 2019.
60. Invited Speaker, [5th Conference on Constraint-Based Reconstruction and Analysis \(COBRA 2018\)](#), Seattle, WA, Oct 14-16, 2018.
59. Invited Tutorial, [14th International Conference on Latent Variable Analysis and Signal Separation](#), University of Surrey, Guildford, UK, July 2-6, 2018.
58. Three-way Methods in Chemistry and Psychology, Angel Fire, NM, June 11-15, 2018.
57. Invited Seminar, University of Granada, Granada, Spain, February 22-23, 2018.
56. Seminar, [Simula Research Laboratory](#), Fornebu, Norway, September 15, 2017.
55. Refereed Paper, EUSIPCO, Kos, Greece, August 28 - September 1, 2017.
54. Seminar, [Sandia National Labs](#), Livermore, CA, April 24, 2017.
53. Seminar, [IBM Research](#), Zurich, Switzerland, March 13, 2017.
52. Seminar, [Steno Diabetes Center](#), Copenhagen, Denmark, October 5, 2016.
51. Invited Talk, 13th NuGOweek: Phenotypes and Prevention - The Interplay of Genes, Life-style factors and Gut Environment, Copenhagen, Denmark, September 5-8, 2016.
50. Invited Minisymp. Talk, [20th Conf. of the International Linear Algebra Society](#), Leuven, Belgium, July 11-15, 2016.
49. Invited Minisymp. Talk, [SIAM Conf. Parallel Processing for Scientific Computing](#), Paris, France, April 12-15, 2016.
48. Organizer/Speaker, [Dagstuhl Perspectives Workshop: Tensor Computing for Internet of Things](#), Schloss Dagstuhl, Germany, April 10-13, 2016.

47. Invited Talk, Metabolomics Young Investigators Network Meeting, Denmark, March 30, 2016.
46. Invited Seminar, The University of Edinburgh, UK, March 17, 2016.
45. [Workshop on Tensor Decompositions and Applications](#), Leuven, Belgium, January 18-22, 2016.
44. Seminar, Ozyegin University, Istanbul, Turkey, December 29, 2015.
43. Mini-Arctic Workshop, Nofima, Ås, Norway, November 5-6, 2015.
42. Seminar, Yeditepe University, Istanbul, Turkey, September 8, 2015.
41. Seminar, Bogazici University, Istanbul, Turkey, August 20, 2015.
40. Refereed Paper, EUSIPCO, Lisbon, Portugal, September 1-5, 2014.
39. Invited Minisymp. Talk, COMPSTAT, Geneva, Switzerland, August 19-22, 2014.
38. Invited Seminar, KU Leuven, Belgium, June 2, 2014.
37. [Arctic Analysis](#), Ilulissat, Greenland, March 10-14, 2014.
36. Invited Minisymp. Talk, [ERCIM](#), University of London, UK, December 14-16, 2013.
35. Invited Seminar, GIPSA-LAB, Grenoble, France, November 8, 2013.
34. Invited Seminar, Xerox Research Centre Europe, Grenoble, France, November 7, 2013.
33. Seminar, Kadir Has University, Istanbul, Turkey, October 23, 2013.
32. Invited Speaker, Biomedical Eng. Society Annual Meeting, Seattle, WA, September 25-28, 2013.
31. Refereed Paper, IEEE Eng. in Medicine and Biology Society, Osaka, Japan, July 3-7, 2013.
30. Seminar, Stanford University, CA, June 3, 2013.
29. Minisymp. Organizer/Speaker, [SIAM Conf. Computational Science and Eng.](#), Boston, MA, February 28, 2013.
28. Refereed Paper, SPIE Medical Imaging Conference, Orlando, FL, February 10, 2013.
27. Invited Seminar, KU Leuven, Belgium, December 14, 2012.
26. Refereed Paper, ICDM Workshop: Biological Data Mining, Brussels, Belgium, December 10, 2012.
25. Invited Minisymp. Talk, [SIAM Conf. Applied Linear Algebra](#), Valencia, Spain, June 18-22, 2012.
24. Three-way Methods in Chemistry and Psychology, Bruges, Belgium, June 2-7, 2012.
23. Seminar, Stanford University, CA, May 10, 2012.
22. Seminar, Sandia National Labs, Livermore, CA, May 7, 2012.
21. Invited Speaker, RPI-NSF Workshop on Multiscale Modeling of Complex Data, Troy, NY, September 12-14, 2011.
20. Invited Speaker, Workshop on Tensor Approximation in High Dimension, Hausdorff Center for Mathematics, Bonn, Germany, August 1-5, 2011.
19. Seminar, Bogazici University, Istanbul, Turkey, March 11, 2011.
18. Seminar, Ozyegin University, Istanbul, Turkey, October 27, 2010.
17. [Workshop on Tensor Decompositions and Applications](#), Bari, Italy, September 13-17, 2010.
16. Invited Minisymp. Talk, BIT50 Trends in Numerical Computing, Lund, Sweden, June 17-20, 2010.
15. Seminar, TUBITAK-UEKAE, January 11, 2010.
14. Invited Minisymp. Talk, [SIAM Conf. Applied Linear Algebra](#), Monterey, CA, October 26-29, 2009.
13. Minisymp. Organizer/Speaker, [SIAM Annual Meeting](#), Denver, Colorado, July 6-10, 2009.
12. Three-way Methods in Chemistry and Psychology, Vall de Núria, Spain, June 14-19, 2009.
11. Invited Seminar, Stanford University, CA, May 27, 2009.
10. Minisymp. Organizer/Speaker, [SIAM Conf. Computational Science and Eng.](#), Miami, FL, March 2-6, 2009.
9. Invited Speaker, Future Directions in Tensor-Based Computation, NSF, Arlington, VA, February 20-21, 2009.
8. KDD Workshop: Data Mining using Matrices and Tensors, Las Vegas, NV, August 24, 2008.
7. Invited Minisymp. Talk, [SIAM Annual Meeting](#), San Diego, CA, July 7-11, 2008.
6. Seminar, Sandia National Labs, Livermore, CA, December 17, 2007.
5. Refereed Paper, [IEEE Eng. in Medicine and Biology Society](#), Lyon, France, August 23-26, 2007.
4. Refereed Paper, [ISMB/ECCB](#), Vienna, Austria, July 21-25, 2007.

3. Invited Minisymposium. Talk, Int. Congress on Industrial and Applied Mathematics, Zurich, Switzerland, July 16-20, 2007.
2. Refereed Paper, IASTED Int. Conf. Biomedical Eng., Innsbruck, Austria, February 17, 2006.
1. Refereed Paper, IEEE Int. Conf. Intelligence and Security Informatics, Atlanta, Georgia, May 19-20, 2005.

#### Software

- [Poblano Toolbox](#) (MATLAB) - Large-scale algorithms for nonlinear optimization.
- [CMTF Toolbox](#) (MATLAB) - Coupled matrix/tensor factorization models for data fusion.

#### Teaching

- Bogazici University (Istanbul, Turkey)
  - Instructor, Numerical Linear Algebra and Its Applications, Fall 2017.
- University of Copenhagen (Copenhagen, Denmark)
  - Instructor, Data Fusion (as part of the multiway analysis course), June 13, 2019.
  - Instructor, Data Fusion, Copenhagen School of Chemometrics, May 25-26, 2016.
  - Instructor, Data Fusion, ODIN course, November 25, 2015.
  - Instructor, Advanced MATLAB for multivariate data analysis, August 2012.
  - Instructor, Introduction to MATLAB for multivariate data analysis, May 2011.
- Rensselaer Polytechnic Institute (Troy, NY)
  - Teaching Assistant: Introduction to Programming in VB using .NET, Fall 2006.
  - Teaching Assistant: Introduction to Programming in C++ using .NET, Spring 2004.
  - Teaching Assistant: Database Systems, Fall 2003 & Fall 2004.

#### Professional Service and Committee Work

- Editorial Work:
  - Associate Editor, [SIAM Journal on Matrix Analysis and Applications \(SIMAX\)](#), Jan. 2019-present.
  - Associate Editor, [IEEE Transactions on Signal Processing](#), Oct. 2019 - April 2022.
  - Guest Editor, [Special Section on CSE Software and Big Data in CSE](#), [SIAM Journal on Scientific Computing \(SISC\)](#), 2015.
- Conference, Workshop & Minisymposium Organization:
  - Organizing Committee: [SIAM Conference on Applied Linear Algebra](#), May 17-21, 2021.
  - Minisymposium Co-organizer, [SIAM Conference on Applied Linear Algebra](#), May 17-21, 2021.
  - Invited Session Co-organizer, [Asilomar Conference on Signals, Systems, and Computers](#), Oct. 31-Nov 3, 2021.
  - Organizing Committee: [Low-rank Optimization and Applications](#), Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany, April 1-5, 2019.
  - Organizing Committee: [Dagstuhl Perspective Workshop: Tensor Computing for Internet of Things](#), Schloss Dagstuhl, Germany, April 10-13, 2016.
  - Organizing Committee: [SIAM Conference on Computational Science and Engineering](#), Salt Lake City, UT, March 14-18, 2015.
  - Minisymposium Co-organizer, [SIAM Conference on Computational Science and Engineering](#), Boston, MA, February 25-March 1, 2013.

- Minisymposium Co-organizer, [SIAM Annual Meeting](#), Denver, CO, July 6-10, 2009.
- Minisymposium Co-organizer, [SIAM Conference on Computational Science and Engineering](#), Miami, FL, March 2-6, 2009.
- Special Activity Group Member:
  - Member, EURASIP Special Area Theme: Biomedical Image and Signal Analytics, 2016-present.
- Program Committee Member:
  - ECML/PKDD, 2021
  - ACM SIGKDD International Conference on Knowledge Discovery & Data Mining (KDD), 2018, 2019 & 2020
  - European Signal Processing Conference (EUSIPCO), 2017, 2018, 2019, 2020 & 2021
  - SIAM International Conference on Data Mining (SDM), 2013 & 2014
  - 21st ACM International Conference on Information and Knowledge Management (CIKM), 2012
- Thesis Committee Member:
  - Jesper L. Hinrich, Technical University of Denmark, Denmark, 2020 (Ph.D.)  
“Probabilistic Tensor Modelling and Applications in Life Sciences”
  - Borbala Hunyadi, KU Leuven, Belgium, 2014 (Ph.D.)  
“Learning from structured EEG and fMRI data supporting the diagnosis of epilepsy”
  - Yusuf Kenan Yilmaz, Bogazici University, Turkey, 2012 (Ph.D.)  
“Generalized Tensor Factorization”
  - Beyza Ermiş, Bogazici University, Turkey, 2012 (M.S.)  
“Probabilistic Tensor Factorization for Link Prediction”
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