

Zeyneb Kurt
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Computer and Information Sciences
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I received my BSc, MSc, and PhD degrees in Department of Computer Engineering from Yildiz Technical University, Istanbul, Turkey, in 2005, 2007, and 2013 respectively.
Between 2015 and 2018, I worked as an experienced post-doctoral researcher at University of California, Los Angeles (UCLA), USA, with a demonstrated history of working in bioinformatics and computational biology fields.
I served as an assistant professor in Department of Computer Engineering at Yildiz Technical University between 2018 and 2020.
My research interests include bioinformatics, computational biology, image processing, and machine learning fields.
My Google Scholar profile: <https://scholar.google.com/citations?hl=en&user=e7v0D7sAAAAJ>

Research interests

Bioinformatics, Computational Biology, Statistics, and Machine Learning

Awards in these fields

An Integrative Wellbeing Framework and Open Online System for NHS and Integrated Care Staff in England and beyond - Awarded by NHS England (£40,000 Co-I, 2022)
Histological sub-classification of medulloblastoma tumours - Awarded by Northumbria University Application Seed Funding (~£13,000 Co-I, 2022).
Co-develop an integrative evaluation model and tools with NHS to support wellbeing and trauma informed care - Awarded by Northumbria University Participatory Research Evaluation Fund (£6,000 Co-I, 2022).
Impact of Qigong intervention on Wellbeing - Awarded by UWTSD Confucius Institute (~£4,000 PI, 2021)
Online Wellbeing Diary - Awarded by NHS England (£10,000 Co-I, 2021)
Identifying subtypes in pancreatic cancer with a novel single-cell RNA sequencing-based ensemble classification model- Awarded by CIS R&I ECR Support Fund (£3,500 PI, 2021)
American Heart Association Postdoctoral Fellowship - for two years (\$110,000 - awarded in 2017)
UCLA Iris Cantor/Women's Health Center Postdoctoral Fellowship - for one year (\$20,000 - awarded in 2017)

Qualifications

Computer Science, PhD, Yildiz Technical University
Sep 2007 → 16 Dec 2013
Award Date: 16 Dec 2013

Computer Science, MSc, Yildiz Technical University
Sep 2005 → 16 Jul 2007
Award Date: 16 Jul 2007

Computer Science, BSc
Sep 2001 → 12 Jul 2005
Award Date: 12 Jul 2005

12 Apr 2022 → ... Fellowship of Higher Education Academy, Reference#: PR239818, FHEA

Employment

Assistant Professor

Computer and Information Sciences
Northumbria University
17 Aug 2020 → present

Lecturer

Computer and Information Sciences
Northumbria University
17 Aug 2020 → present

Research outputs

A self-monitoring wellbeing screening methodology for keyworkers, 'My Personal Wellbeing', using an integrative wellbeing model

Elvin, G., Kurt, Z., Kennedy, A., Sice, P., Walton, L. & Patel, P., 14 Mar 2023, In: BMC Health Services Research. 23, 1, 9 p., 250.

Integrative Multiomics to Dissect the Lung Transcriptional Landscape of Pulmonary Arterial Hypertension

Hong, J., Wong, B., Rhodes, C. J., Kurt, Z., Schwantes-An, T-H., Mickler, E. A., Gräf, S., Eyries, M., Lutz, K. A., Pauciulo, M. W., Trembath, R. C., Montani, D., Morrell, N. W., Wilkins, M. R., Nichols, W. C., Tréguouët, D-A., Aldred, M. A., Desai, A. A., Tuder, R. M., Geraci, M. W., & 3 othersEghbali, M., Stearman, R. S. & Yang, X., 16 Jan 2023, (Submitted) Cold Spring Harbor, US: bioRxiv, 63 p.

A Pilot Study on the Impacts of Lung-Strengthening Qigong on Wellbeing

Kurt, Z., Sice, P., Krajewska, K., Elvin, G., Xie, H., Ogwu, S., Wang, P. & Turgut, S. S., 1 Dec 2022, In: Complementary Therapies in Medicine. 71, 16 p., 102891.

Is the use of deep learning an appropriate means to locate debris in the ocean without harming aquatic wildlife?

Moorton, Z., Kurt, Z. & Woo, W. L., 1 Aug 2022, In: Marine Pollution Bulletin. 181, p. 1-7 7 p., 113853.

Correction: Refining colorectal cancer classification and clinical stratification through a single-cell atlas

Khaliq, A. M., Erdogan, C., Kurt, Z., Turgut, S. S., Grunvald, M. W., Rand, T., Khare, S., Borgia, J. A., Hayden, D. M., Pappas, S. G., Govekar, H. R., Kam, A. E., Reiser, J., Turaga, K., Radovich, M., Zang, Y., Qiu, Y., Liu, Y., Fishel, M. L., Turk, A., & 11 othersGupta, V., Al-Sabti, R., Subramanian, J., Kuzel, T. M., Sadanandam, A., Waldron, L., Hussain, A., Saleem, M., El-Rayes, B., Salahudeen, A. & Masood, A., 13 Jul 2022, In: Genome biology. 23, 1, 1 p., 156.

Refining colorectal cancer classification and clinical stratification through a single-cell atlas

Khaliq, A. M., Erdoğan, C., Kurt, Z., Turgut, S. S., Grunvald, M. W., Rand, T., Khare, S., Borgia, J. A., Hayden, D. M., Pappas, S. G., Govekar, H. R., Kam, A. E., Reiser, J., Turaga, K., Radovich, M., Zang, Y., Qiu, Y., Liu, Y., Fishel, M. L., Turk, A., & 11 othersGupta, V., Al-Sabti, R., Subramanian, J., Kuzel, T. M., Sadanandam, A., Waldron, L., Hussain, A., Saleem, M., El-Rayes, B., Salahudeen, A. & Masood, A., 11 May 2022, In: Genome Biology. 23, 1, 30 p., 113.

Bioinformatics Analysis of the Potentially Functional circRNA-miRNA-mRNA Network in Breast Cancer

Erdogan, C., Suer, İ., Kaya, M., Kurt, Z., Öztürk, Ş. & Aydin, N., 11 Jan 2022, (Submitted).

The impact of Lung-Strengthening Qigong on wellbeing: a case study

Kurt, Z., Sice, P., Krajewska, K., Elvin, G., Xie, H., Ogwu, S., Wang, P. & Turgut, S. S., 29 Nov 2021, (Submitted).

Transcription Factor MAFF (MAF Basic Leucine Zipper Transcription Factor F) Regulates an Atherosclerosis Relevant Network Connecting Inflammation and Cholesterol Metabolism

von Scheidt, M., Zhao, Y., de Aguiar Vallim, T. Q., Che, N., Wierer, M., Seldin, M. M., Franzén, O., Kurt, Z., Pang, S., Bongiovanni, D., Yamamoto, M., Edwards, P. A., Ruusalepp, A., Kovacic, J. C., Mann, M., Björkegren, J. L. M., Lusic, A. J., Yang, X. & Schunkert, H., 4 May 2021, In: Circulation. 143, 18, p. 1809-1823 15 p.

Redefining tumor classification and clinical stratification through a colorectal cancer single-cell atlas

Khaliq, A. M., Kurt, Z., Grunvald, M. W., Erdogan, C., Turgut, S. S., Rand, T., Khare, S., Borgia, J. A., Hayden, D. M., Pappas, S. G., Govekar, H. R., Bhama, A. R., Singh, A., Jacobson, R. A., Kam, A. E., Zloza, A., Reiser, J., Catenacci, D. V., Turaga, K., Radovich, M., & 9 othersThyparambil, S., Levy, M. A., Subramanian, J., Kuzel, T. M., Sadanandam, A., Hussain, A., El-Rayes, B., Salahudeen, A. & Masood, A., 7 Feb 2021, (Submitted) In: bioRxiv. 40 p., 429256.

1812-P: Multitissue Single-Cell Analysis Reveals Differential Tissue, Cellular, and Molecular Sensitivity between Fructose and High-Fat Diets

Arneson, D., Majid, S., Ahn, I. S., Kurt, Z., Diamante, G., Zhang, G., Gómez-Pinilla, F. & Yang, X., 4 Jun 2019, In: Diabetes. 68, Supplement 1, p. 1812-P

The Genetic Architecture of Diet-Induced Hepatic Fibrosis in Mice

Hui, S. T., Kurt, Z., Tuominen, I., Norheim, F., C.Davis, R., Pan, C., Dirks, D. L., Magyar, C. E., French, S. W., Chella Krishnan, K., Sabir, S., Campos-Pérez, F., Méndez-Sánchez, N., Macías-Kauffer, L., León-Mimila, P., Canizales-

Quinteros, S., Yang, X., Beaven, S. W., Huertas-Vazquez, A. & Lusic, A. J., 8 Nov 2018, In: *Hepatology*. 68, 6, p. 2182-2196 15 p.

Tissue-specific pathways and networks underlying sexual dimorphism in non-alcoholic fatty liver disease 06 Biological Sciences 0604 Genetics

Kurt, Z., Barrere-Cain, R., Laguardia, J., Mehrabian, M., Pan, C., Hui, S. T., Norheim, F., Zhou, Z., Hasin, Y., Lusic, A. J. & Yang, X., 22 Oct 2018, In: *Biology of Sex Differences*. 9, 1, 46.

The Memory of Environmental Chemical Exposure in *C. elegans* Is Dependent on the Jumonji Demethylases *jmjd-2* and *jmjd-3/utx-1*

Camacho, J., Truong, L., Kurt, Z., Chen, Y. W., Morselli, M., Gutierrez, G., Pellegrini, M., Yang, X. & Allard, P., 22 May 2018, In: *Cell Reports*. 23, 8, p. 2392-2404 13 p.

Abstract 468: Cross-species Comparison of Genetic Networks of Coronary Artery Disease

Kurt, Z., Barrere-Cain, R. E., Sun, C., Zhao, Y., Pan, C., Ruusalepp, A., Franzén, O., Koplev, S., Bjorkegren, J. L., Lusic, A. J. & Yang, X., May 2018.

Integration of Multi-omics Data from Mouse Diversity Panel Highlights Mitochondrial Dysfunction in Non-alcoholic Fatty Liver Disease

Chella Krishnan, K., Kurt, Z., Barrere-Cain, R., Sabir, S., Das, A., Floyd, R., Vergnes, L., Zhao, Y., Che, N., Charugundla, S., Qi, H., Zhou, Z., Meng, Y., Pan, C., Seldin, M. M., Norheim, F., Hui, S., Reue, K., Lusic, A. J. & Yang, X., 24 Jan 2018, In: *Cell Systems*. 6, 1, p. 103-115.e7 21 p.

Estimation of the proteomic cancer co-expression sub networks by using association estimators

Erdoğan, C., Kurt, Z. & Diri, B., 16 Nov 2017, In: *PLoS One*. 12, 11, p. e0188016

Shared genetic regulatory networks for cardiovascular disease and type 2 diabetes in multiple populations of diverse ethnicities in the United States

Cardiogenics Consortium, 28 Sep 2017, In: *PLoS Genetics*. 13, 9, p. e1007040

Ağ Çıkarım Algoritmalarındaki İlişki Tahminçilerinin Meme Kanseri Proteomik Verileri Üzerinde İncelenmesi

Erdogan, C., Kurt, Z. & Diri, B., 27 Jun 2017, *2017 25th Signal Processing and Communications Applications Conference, SIU 2017*. Institute of Electrical and Electronics Engineers Inc., 7960670. (2017 25th Signal Processing and Communications Applications Conference, SIU 2017).

Applications and Limitations of Mouse Models for Understanding Human Atherosclerosis

von Scheidt, M., Zhao, Y., Kurt, Z., Pan, C., Zeng, L., Yang, X., Schunkert, H. & Lusic, A. J., 7 Feb 2017, In: *Cell Metabolism*. 25, 2, p. 248-261 14 p.

Mergeomics: Multidimensional data integration to identify pathogenic perturbations to biological systems

Shu, L., Zhao, Y., Kurt, Z., Byars, S. G., Tukiainen, T., Kettunen, J., Orozco, L. D., Pellegrini, M., Lusic, A. J., Ripatti, S., Zhang, B., Inouye, M., Mäkinen, V. P. & Yang, X., 4 Nov 2016, In: *BMC Genomics*. 17, 1, 874.

Comprehensive review of association estimators for the inference of gene networks

Kurt, Z., Aydin, N. & Altay, G., 23 Mar 2016, In: *Turkish Journal of Electrical Engineering and Computer Sciences*. 24, 3, p. 695-U1401

Mergeomics: integration of diverse genomics resources to identify pathogenic perturbations to biological systems

Shu, L., Zhao, Y., Kurt, Z., Byars, S. G., Tukiainen, T., Kettunen, J., Ripatti, S., Zhang, B., Inouye, M., Makinen, V-P. & Yang, X., 7 Jan 2016

Structural Analysis of Treatment Cycles Representing Transitions between Nursing Organizational Units Inferred from Diabetes

Dehmer, M., Kurt, Z., Emmert-Streib, F., Them, C., Schulc, E. & Hofer, S., 1 Jun 2015, In: *PLoS One*. 10, 6

A comprehensive comparison of association estimators for gene network inference algorithms

Kurt, Z., Aydin, N. & Altay, G., 1 Aug 2014, In: *Bioinformatics*. 30, 15, p. 2142-2149

Netmes: Assessing Gene Network Inference Algorithms by Network-Based Measures

Altay, G., Kurt, Z., Dehmer, M. & Emmert-Streib, F., 2014, In: *Evolutionary Bioinformatics*. 10, p. 1-9

Impacts of the different spline orders on the B-spline association estimator

Kurt, Z., Aydin, N. & Altay, G., 1 Dec 2013, *13th IEEE International Conference on Bioinformatics and BioEngineering, IEEE BIBE 2013*. 6701663. (13th IEEE International Conference on Bioinformatics and BioEngineering, IEEE BIBE 2013).

Comparison of several classification algorithms for gender recognition from face images

Sakarkaya, M., Yanbol, F. & Kurt, Z., 1 Oct 2012, *INES 2012 - IEEE 16th International Conference on Intelligent Engineering Systems, Proceedings*. p. 97-101 5 p. 6249810. (INES 2012 - IEEE 16th International Conference on Intelligent Engineering Systems, Proceedings).

Comparison of feature extraction and feature selection approaches to decide whether a face image belongs to a male or a female

Basmaci, E. S., Kaymakcioglu, U. & Kurt, Z., 20 Apr 2011, *2011 IEEE 19th Signal Processing and Communications Applications Conference, SIU 2011*. Piscataway, NJ: IEEE, p. 522-525 4 p. 5929702. (2011 IEEE 19th Signal Processing and Communications Applications Conference, SIU 2011).

Renkli resimlerin kayipli sıkıştırılmasında farklı renk uzaylarının etkisi

Böke, S. B., Diri, B. & Yavuz, Z. K., 22 Apr 2010, *SIU 2010 - IEEE 18th Signal Processing and Communications Applications Conference*. Piscataway, NJ: IEEE, p. 609-612 4 p. 5653656. (SIU 2010 - IEEE 18th Signal Processing and Communications Applications Conference).

Searching optimal sigma parameter in Radial Basis Kernel Support Vector Machine for classification of HIV sub-type viruses

Kurt, Z. & Yavuz, O., 2010, *SIGMAP 2010 - Proceedings of the International Conference on Signal Processing and Multimedia Applications*. p. 163-166 4 p. (SIGMAP 2010 - Proceedings of the International Conference on Signal Processing and Multimedia Applications).

Linear discriminant analysis in Ottoman alphabet character recognition

Kurt, Z., Turkmen, H. I. & Karşlıgil, M. E., 1 Dec 2009, *Proceedings of the European Computing Conference*. VOL.2 ed. p. 601-607 7 p. (Lecture Notes in Electrical Engineering; vol. 28 LNEE, no. VOL.2).

Genişletilmiş Kalman filtresi yöntemine dayalı eş zamanlı konum belirleme ve haritalama algoritması

Yavuz, S., Kurt, Z. & Biçer, M. S., 9 Apr 2009, *2009 IEEE 17th Signal Processing and Communications Applications Conference, SIU 2009*. Piscataway, NJ: Institute of Electrical and Electronics Engineers Inc., p. 700-703 4 p. 5136492. (2009 IEEE 17th Signal Processing and Communications Applications Conference, SIU 2009).

A simultaneous localization and map building algorithm based on sequential Monte Carlo method

Kurt, Z. & Yavuz, S., 20 Apr 2008, *2008 IEEE 16th Signal Processing, Communication and Applications Conference*. Piscataway, NJ: Institute of Electrical and Electronics Engineers Inc., 4 p. 4632712

Global feature based female facial beauty decision system

Türkmen, H. I., Kurt, Z. & Karşlıgil, M. E., 1 Dec 2007, *15th European Signal Processing Conference, EUSIPCO 2007 - Proceedings*. p. 1945-1949 5 p. (European Signal Processing Conference).

DAA yöntemi ile Osmanlıca karakter tanıma

Kurt, Z., Türkmen, H. I. & Karşlıgil, M. E., 11 Jun 2007, *2007 IEEE 15th Signal Processing and Communications Applications, SIU*. Piscataway, NJ: Institute of Electrical and Electronics Engineers Inc., 4 p. 4298685. (2007 IEEE 15th Signal Processing and Communications Applications, SIU).

Türk işaret dili yüz ifadesi ve baş hareketi veritabanı

Aran, O., Ari, I., Güvensan, A., Haberdar, H., Kurt, Z., Türkmen, I., Uyar, A. & Akarun, L., 11 Jun 2007, *2007 IEEE 15th Signal Processing and Communications Applications, SIU*. Piscataway, NJ: Institute of Electrical and Electronics Engineers Inc., 4 p. 4298708. (2007 IEEE 15th Signal Processing and Communications Applications, SIU).

Destek vektör makinesi yöntemi ile yüz güzelliği kararı

Türkmen, H. I., Kurt, Z. & Karşlıgil, M. E., 17 Apr 2006, *2006 IEEE 14th Signal Processing and Communications Applications Conference*. Piscataway, NJ: Institute of Electrical and Electronics Engineers Inc., 1659754. (2006 IEEE 14th Signal Processing and Communications Applications Conference; vol. 2006).

Prizes

American Heart Association Postdoctoral fellowship 2017

Kurt, Zeyneb (Recipient), Jun 2017

UCLA women's health center and Iris Cantor - postdoctoral fellowship for 1 year

Kurt, Zeyneb (Recipient), Jul 2017

PGR Supervision

Olalekan Ogundipe, Start Date: 18/01/2021