

Curriculum Vitae
Ebru ÇANKAYA
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<http://www.utdallas.edu/~exc067000>

RESEARCH INTERESTS:

- Risk Modeling in Databases
- Computer and Network Security
- Lossless Text Compression
- Cloud Computing

EDUCATION:

University of Texas at Dallas, TX, USA, 2007-2009.

• **M.S. in IT & Management (August, 2009).**

- GPA: 3.81 / 4.00, Graduate Course Work: Organizational Behavior, Marketing Management, Strategic Management, Systems Analysis and Project Management, Organizational Decision Making, Enterprise Resource Computing, Strategic Impact of Information Technology, DBMS, Telecommunications, Information Technology Security and Audit, IT Outsourcing, Quantitative Introduction to Risk and Uncertainty.

Ege University, Izmir/Turkey, 1991-2004.

• **Ph.D. in Computer Science, International Computer Institute (April, 2004).**

- Dissertation: Compression and Modeling of Turkish Texts.
- GPA: 85.43/100, Graduate Course Work: Parallel Programming, Network Security, Algorithmic Complexity Theory, Fundamentals of Algorithms, Advanced Programming with Java, Advanced Computer Architecture, Computer Network Programming, Psychological Development and Learning, Curriculum Development and Evaluation.

• **MBA in Faculty of Economics and Administrative Sciences (August, 2000).**

- Dissertation: The Role of Internet in Modern Marketing Concept: Izmir Organized Industrial Zone Case.
- GPA: 94.90/100, Graduate Course Work: Marketing Research, Marketing Management, Consumer Behaviour, Production Planning and Control, Management Policies, International Marketing, Sales Management, Advertisement Research, Strategic Human Resources Management, Management Information Systems.

• **M.S. in Computer Science, Computer Science Department (August, 1997).**

- Dissertation: Computerized Management Information Systems and Web Design Application of Ege University Faculty of Economics and Administrative Sciences.
- GPA: 86/100, Graduate Course Work: Information Theory, Computer Security, Performance Analysis, Local Area Networks, Distributed Computer Systems, Cryptology, Software Reliability, Compiler Design.

- **BSc. in Computer Engineering, Computer Science Department (July, 1994).**
– GPA: 85.37/100, Graduated as the honor student.

AWARDS AND HONORS:

- Outstanding Teaching and Service Award, University of Texas at Dallas, Department of Computer Science, December 2015.
- Faculty of the Month Campus Winner Award, The National Association of College and University Residence Halls, University of Texas at Dallas, January 2013.
- “Thank a Teacher” Award, University of North Texas Department of Computer Science, Fall 2011.
- TUBITAK (The Scientific and Technical Research Council of Turkey) International Publication Encouragement Award, 2004. – for two different publications-
- EBILTEM (Ege University Science and Technology Center) Publication Award, 2004. –for two different publications-
- TUBITAK (The Scientific and Technical Research Council of Turkey) International Publication Encouragement Award, 2003.
- EBILTEM (Ege University Science and Technology Center) Publication Award, 2003.
- EBILTEM (Ege University Science and Technology Center) Project Competition and Exhibition Participation Award for “Compression with Encryption (CwE) Algorithm”, 2003.
- Ege University Department of Computer Science Graduation Degree of Honor Award, 1994.

RESEARCH EXPERIENCE:

Postdoc Research Associate, University of Texas at Dallas, Erik Jonsson School of Engineering and Computer Science, Department of Computer Science, Richardson, TX, USA, 07/06 - 07-07.

TEACHING EXPERIENCE:

Senior Lecturer, Department of Computer Science, University of Texas at Dallas, Richardson, TX, 01/12-present.

- Teaching Software Engineering, Database Systems, Computer Architecture, Digital Logic and Computer Design, Advanced Algorithm Design and Analysis courses.
- Teaching at the Computer Science K12 Outreach @ UT-Dallas program.

Senior Lecturer, Department of Computer Science & Engineering, University of North Texas, Denton, TX, 08/11-12/11.

- Teaching Computer Science II (C Programming), Computer Science III (C++ Programming), Computer Network Design, Network and Security Management, Secure E-Commerce courses.

Lecturer, Department of Computer Science & Engineering, University of North Texas, Denton, TX, 09/07-07/11.

- Teaching Introduction to Computer Security, Secure E-Commerce, Introduction to Computers, Natural Language Processing, Network and Security Management courses.

Adjunct Professor, Department of Computer Science & Engineering, Southern Methodist University, Dallas, TX, Fall 2008, Summer 2009.

- Teaching Master of Security Engineering courses at L3 communications and Lockheed Martin.

Visiting Assistant Professor, Department of Computer Science, Earlham College, Richmond, IN, 07/05-05/06.

- Teaching Algorithms and Data Structures, Programming Languages, Advanced Programming with C++, Introduction to Cryptology courses, mentoring Content and Pedagogical Groups.

Visiting Assistant Professor, Department of Computer Science, Izmir University of Economics, Izmir, Turkey, 10/04-06/05.

- Teaching Introduction to Computers and Logic Design courses.

Assistant Professor, International Computer Institute, Ege University, Izmir/ Turkey, 08/04-07/07.

- Teaching Algorithms and Data Structures, Programming Languages, DBMS, Advanced Programming with Java courses, research, faculty board membership, student advisor.

Lecturer, International Computer Institute, Ege University, Izmir/ Turkey, 11/01-08/04.

- Teaching Algorithms and Data Structures, Programming Languages, DBMS courses, research.

Research Assistant, International Computer Institute, Ege University, Izmir/ Turkey, 08/99-11/01.

- Admin of Multimedia and Unix laboratories, teaching assistant for network, Java, DBMS.

Research Assistant, Faculty of Economics and Administrative Sciences, Ege University, Izmir/Turkey, 04/97 -08/99.

- Lecturing Introduction to Computers, admin of PC laboratory.

INDUSTRY EXPERIENCE:

System Administrator, Electronics Computers Communications (ECC), Izmir/ Turkey, 02/95 – 11/96.

- Admin of 50 user Novell Network.

Summer Intern, NETSIS, Izmir/Turkey, 07/93-09/93.

PUBLICATIONS AND PRESENTATIONS:

Journals:

- **Cankaya Celikel Ebru**, Vinayak Hina, “A Novel Text Processing for Better Compression and Security in Cloud”, International Journal of Computer Theory and Engineering vol. 8, no. 1, pp. 1-6, 2016.

- **Cankaya Celikel Ebru**, Nair Suku, Cankaya Hakki C., “Applying Error Correction Codes to Achieve Security and Dependability”, *Journal of Computers Standards and Interfaces*, Volume 35, Issue 1, January 2013, Pages 78–86.
- **Cankaya Celikel Ebru**, Palaniappan Venka, Latifi Shahram, “Exploiting Redundancy to Achieve Lossy Text Compression”, *Pamukkale University Journal of Engineering Sciences*, 16 (3), 2010.
- Sroufe Paul, Tate Steve, Dantu Ram, **Cankaya Celikel Ebru**, “Experiences During a Collegiate Cyber Defense Competition”, *Journal of Applied Security Research*, 5 (3), July, 2010.
- **Celikel Ebru**, Kantarcioglu Murat, Thuraisingham Bhavani, Bertino Elisa, “A Risk Management Approach to RBAC”, *Journal of Risk and Decision Analysis*, vol. 1, no. 1, pp. 21-33, 2009.
- Kardas Geylani, **Celikel Ebru**, Alaybeyoglu Aysegul, “A Secure Message Transmission System Architecture for Computer Networks Employing Smart Cards” (in Turkish), *Pamukkale University Journal of Engineering Sciences*, 14 (1), 2008.
- **Celikel Ebru**, Dalkilic M. Emin, Dalkilic Gokhan, “Word Based Fixed and Flexible List Compression”, *LNCS Vol. 3733*, pp. 780-790, October 26-28, 2005, Istanbul/Turkey.
- **Celikel Ebru**, Dalkilic M. Emin; "A New Encoding Decoding Scheme for Text Compression with Embedded Security", *Journal of Mathematical and Computational Applications*, Vol. 9, No. 3, pp. 475-484, December 2004.
- **Celikel Ebru**, Dalkilic M. Emin; "Investigating The Effects of Recency and Size of Training Text on Author Recognition Problem", *Int'l Symposium on Computer and Information Sciences (ISCIS) XIXth*, *LNCS Vol. 3280*, pp. 21-30, October 27-29, 2004, Antalya/Turkey.
- **Celikel Ebru**, Dalkilic M. Emin; "A Preprocessor Adding Security to and Improving The Performances of Arithmetic and Huffman Codings", *Advances in Information Systems (ADVIS)*, Third Biennial Int'l Conference, *LNCS Vol. 3261*, pp. 420-429, October 20-22, 2004, Izmir/Turkey.
- **Celikel Ebru**, Dalkilic M. Emin; "A Security Embedded Text Compression Algorithm", *Int'l Symposium on Computer and Information Sciences (ISCIS) XVIIIth*, *LNCS Vol. 2869*, pp. 187-195, November 3-5, 2003, Antalya/Turkey.

Conferences:

- Muggler Michael, Eshwarappa Rekha, **Cankaya Celikel Ebru**, “Cybersecurity Management Through Logging Analytics”, *Applied Human Factors and Ergonomics*, 17-21 July, 2017, Los Angeles, CA (accepted paper).

- **Cankaya Celikel Ebru**, Kupka Brad, “A Survey of Digital Forensics Tools for Database Extraction”, Future Technologies Conference, San Francisco, CA, 6-7 December, 2016.
- Eich James, John Lalu, Smith Kolin, **Cankaya Celikel Ebru**, “Extended Password Security via Cloud: CloudPass”, 7th International Conference on Applied Human Factors and Ergonomics, AHFE2016, Florida, 27-31 July, 2016.
- **Cankaya Celikel Ebru**, Carr Luke Daniel, “Implementing a Bitcoin Exchange with Enhanced Security”, 13th International Conference on Information Technology: New Generations, ITNG2016, Las Vegas, April 11-13, 2016.
- **Cankaya Celikel Ebru**, Kywe Than, “A Secure Healthcare System: From Design to Implementation”, International Conference on Soft Computing and Software Engineering, volume 62, pp. 203–212, March 5-6, 2015, UC Berkeley, Berkeley, CA.
- **Cankaya Celikel Ebru**, “The Effect of Changing Programming Language to Student Success in Undergraduate Computer Science Curriculum”, International Conference on Frontiers in Education: Computer Science and Computer Engineering, Las Vegas, NV, 21-24 July, 2014.
- Ulusoy Huseyin, Kantarcioglu Murat, Thuraishingham Bhavani M., **Cankaya Celikel Ebru**, Pattuk Erman, “Analysis of heuristic based access pattern obfuscation.”, 9th IEEE International Conference on Collaborative Computing: Networking, Applications and Worksharing, October 20-23, 2013, Austin, TX.
- **Cankaya Celikel Ebru**, Darwish Omar, “Improving Compression Performance with a Star Encoding Front End: A Linguistic Comparison”, International Conference on Foundations of Computer Science, Las Vegas, NV, 22-25 July, 2013.
- Chartree Jedsada, **Cankaya Celikel Ebru**, Phithakkitnukoon Santi, “Query Expansion Using Association Matrix For Improved Information Retrieval Performance”, International Conference on Information and Knowledge Engineering, Las Vegas, NV, 22-25 July, 2013.
- Israelson Jennifer, **Cankaya Celikel Ebru**, “A Hybrid Web Based Personal Health Record System Shielded with Comprehensive Security”, Hawaii Int’l Conf. on System Sciences, Maui, HI, 4-7 January, 2012.
- Garlick Ryan, **Cankaya Celikel Ebru**, “Using Alice in CS1 – A Quantitative Experiment”, ITiCSE 2010, The 15th Annual Conference on Innovation and Technology in Computer Science Education, Ankara, Turkey, June 26-30, 2010.
- Dai Chenyung, Lin Dan, Kantarcioglu Murat, Bertino Elisa, **Celikel Ebru**, Thuraishingham Bhavani, “Query Processing Techniques for Compliance with Data Confidence Policies”, LNCS 5776, pp. 49-67, Secure Data Management 2009, Lyon, France, August 28, 2009.
- **Celikel Ebru**, Kantarcioglu Murat, Thuraishingham Bhavani, Bertino Elisa, “Managing Risks in RBAC Employed Distributed Environments”, LNCS 4804, pp. 1548-1566, The 2nd

International Symposium on Information Security (IS'07) Vilamoura, Algarve, Portugal, Nov 26-27, 2007.

- Kardas Geylani, **Celikel Ebru**, “A Smart Card Mediated Mobile Platform for Secure E-Mail Communication”, 4th International Conference on Information Technology: New Generations, IEEE Computer Society, Las Vegas, NV, 2-4 April, 2007.
- Nair Suku, **Celikel Ebru**, Marchetti Marco, “Adaptive Security and Reliability Using Linear Erasure Correction Codes”, The 7th IBIMA Conference on Internet & Information Systems in the Digital Age, Brescia, Italy, 14-16 December 2006.
- **Celikel Ebru**, Davidson Jean, Kern Colin, “Parallel Performance of DES in ECB Mode”, 7th Int’l Symposium on Computer Networks (ISCN’06), Istanbul/Turkey, June 16-18, 2006.
- **Celikel Ebru**, “Potential Women in Science”, InWIC 2006 (Indiana Women in Computing), Spencer, IN, February 3-4, 2006.
- **Celikel Ebru**, “Security Threats Against Information Systems”, International Conference on Business Management & Economics in a Changing World, Izmir/Turkey, June 16-19, 2005.
- **Celikel Ebru**, "A Cryptographic Approach to Language Identification: PPM", 7th Int’l Conference on Enterprise Information Systems (ICEIS), Miami, FL, May 24-28, 2005.
- **Celikel Ebru**, "Language Discrimination via PPM Model", Int’l Conference on Information Technology (ITCC) 2005, Las Vegas, NV, April 4-6, 2005.
- **Celikel Ebru**, Kardas Geylani, “Realization of a Secure Transmission Platform on A Client/Server Architecture with Smart Card Mobile Environment Supported Asymmetrical Encryption System”, Akademik Bilisim, Gazientep/Turkey, February 2-4, 2005.
- **Celikel Ebru**, Dincer B. Taner; “Improving the Compression Performance of Turkish Texts with PoS Tags", Int’l Conference on Information and Knowledge Engineering (IKE'04), Las Vegas, NV, June 21-24, 2004.
- **Celikel Ebru**, Dalkilic M. Emin; "Experiments on A Secure Compression Algorithm", Int’l Conference on Information Technology (ITCC) 2004, Las Vegas, NV, April 5-7, 2004.
- **Celikel Ebru**; "The Transition Period of Internet in Commercial World", VIIIth Internet Congress, Istanbul/Turkey, December 19-21, 2002.
- Dalkilic M. Emin, **Celikel Ebru**; "Concept of and Experiments on Combining Compression with Encryption", Int’l Symposium on Computer and Information Sciences (ISCIS) XVIIth , pp. 130-134, Orlando, FL, October 28-30, 2002.

- Dalkilic M. Emin, **Celikel Ebru**; "Performance and Sensitivity Comparisons of Some Lossless Compression Algorithms", Int'l Symposium on Computer and Information Sciences (ISCIS) XVIth, pp. 375-382, Antalya/Turkey, November 5-7, 2001.
- Akgungor Sedef, **Celikel Ebru**; "Internet and Marketing: Izmir Production Industry Case", 5th National Marketing Congress, Antalya/Turkey, November 16-18, 2000.
- **Celikel Ebru**, Ikiz A. Salih; "Potential Problems and Solution Proposals for the Female Academic Staff of Ege University", 4th National Women Studies Meeting, Izmir/Turkey, September 7-9, 1998.

Research Projects:

- **Cankaya Ebru**, HALL Corey, BARNES Zachary, GWENDOLYN Eskridge, UTDesign Project: "Coating Team Data Collection", UTD and Raytheon, Fall 2014.
- **Cankaya Ebru**, senior CS students, UTDesign Project: "Big Data Analytics", UTD and Randomlogics, Fall 2013.
- **Cankaya Ebru**, senior CS students, "PC Deployment", UTD and Texas Instruments, Spring 2013.
- Nandu Manem Mano, Deepika Gangula, **Cankaya Ebru**, "Implementation and Performance Evaluation of HTTP, TCP and Socket Based Message Passing Systems Using C#.NET" (poster presentation), University of North Texas Department of Computer Science, 2011 December CSE Advisory Council Meeting, Denton, TX, December 2011.
- **Cankaya Ebru**, Joll Devin, "Experimental Work on Improving WEP Security for Wireless Networks", Research Project, Denton, TX, July 2011.
- **Cankaya Ebru**, Gomez Beatriz, Rattey Nivashini, "Secure Remote Desktop Protocol (RDP) using VirtBot", Research Project, Denton, TX, July 2011.
- **Cankaya Ebru**, Rhoads Jacob, Dosani Ishan, "Dictionary Password Cracker", Research Project, Denton, TX, July 2011.
- **Cankaya Ebru**, Kulkarni Vinitha, Patil Prathiba "Secure Mobile Healthcare System using Trust-Based Multicast Scheme", Research Project, Denton, TX, July 2011.
- **Celikel Ebru**, Suryawanshi Anju, "3D Implementation of DES and AES Algorithms", Research Project, Denton, TX, October, 2009.
- **Celikel Ebru**, Gujjari Venela; "Risk Analysis and Management in Information Systems", Directed Graduate Study, University of North Texas, Denton, TX, April, 2008.

- **Celikel Ebru**, Kardas Geylani; “Realization of a Secure Transmission Platform on A Client/Server Architecture with Smart Card Mobile Environment Supported Asymmetrical Encryption System”, Research Project 2004/UBE/001, Izmir, Turkey, July 2005.
- Dalkilic M. Emin, **Celikel Ebru**, Basgok Burak; "Realization of a Parallel Computing Platform with Linux Based PC Cluster", Research Project 2002/UBE/001, Izmir, Turkey, July 2004.
- Alakent Bahar, **Celikel Ebru**, Gungor Cengiz, Yildirim Sule; "The Software Infrastructure Creation for the Development of a Web Based Distance Education System", Research Project 2001/UBE/001, Izmir, Turkey, March 2003.
- Alakent Bahar, **Celikel Ebru**, Yildirim Sule; "Organization of the Multimedia Programming Laboratory Using Video Editing Facilities", Research Project 99/UBE/003, Izmir, Turkey, December, 2000.
- Akgungor Sedef, **Celikel Ebru**, “A New Approach to Marketing Concept: Internet”, Research Project, 99/IKT/002, Izmir, Turkey, June 1999.

Technical Reports:

- **Celikel Ebru**, Kantarcioglu Murat, Thuraishingham Bhavani, Cavus Dilsad, “A Model for Risk Adaptive Access Control in RBAC Employed Distributed Environments”, UTDCS-68-06 Technical Report, Richardson, TX, December, 2006.

Books:

- **Cankaya Celikel Ebru**, “Authentication”, book chapter, Encyclopedia of Cryptography and Security, 2nd ed., Springer, Tilborg, Jajodia (Eds.), 2011.
- **Cankaya Celikel Ebru**, “The Bell - La Padula Confidentiality Model”, book chapter, Encyclopedia of Cryptography and Security, 2nd ed., Springer, Tilborg, Jajodia (Eds.), 2011.
- **Cankaya Celikel Ebru**, “Chinese Wall model”, book chapter, Encyclopedia of Cryptography and Security, 2nd ed., Springer, Tilborg, Jajodia (Eds.), 2011.
- Kececioglu Tamer, **Celikel Ebru**, Cinarli Sinem; "What is Strategy?" Michael Porter - Translation (in Turkish)-, 1998.

PROFESSIONAL ACTIVITIES:

- Leadership Academy: Tools, Resources, and Practices to Strengthen Your Program, Working Connections IT Faculty Development Institute, Frisco, TX, 11-17 July, 2016.
- Microsoft Public Cloud Services Certificate, Working Connections IT Faculty Development Institute, Frisco, TX, 13-17 July, 2015.

- Faculty Advisor for Women Who Compute Student Organization in Summer 2014, University of Texas at Dallas.
- EMC Cloud Certificate, Summer Working Connections IT Faculty Development Institute, Frisco, TX, July 8-12, 2013.
- COMPSAC2013 (The IEEE Signature Conference on Computer Software and Applications) Doctoral Symposium Chair, Kyoto, Japan, July 22-26, 2013.
- COMPSAC2012 (The IEEE Signature Conference on Computer Software and Applications) Doctoral Symposium Chair, Izmir, Turkey, July 16-20, 2012.
- TUES/CCLI (Course Curriculum and Laboratory Improvement) Annual Workshop, University of Texas at Dallas, Richardson, TX, May 23, 2012.
- Invited speaker, “Error Correction Codes for Computer Security”, SoMiC Workshop, University of North Texas, Department of Computer Science, Denton, TX, April 9, 2012.
- Mentoring UTDallas Department of Computer Science tutors, Richardson, TX, Spring 2012.
- Programming Mobile Devices Certificate, Working Connections IT Faculty Development Institute, Frisco, TX, 11-15 July, 2011.
- TechKnowFire Teacher Edition, Convergence Technology Center, Frisco, TX, 16 June, 2011.
- TakeDownCon Taking Down Security Conference, Dallas, TX, 18-19 May, 2011.
- “Legal Issues Confronting IT: Social Media, Intellectual Property, and Lawsuits” Seminar, presented by Peter S. Vogel, University of North Texas (UNT) Center for Decision And Information Technologies, Denton, TX, March 2, 2011.
- Wireless Security Certificate, Working Connections IT Faculty Development Institute, Frisco, TX, 12-16 July, 2010.
- Teaching Academy Certificate (TAC) program, University of Texas at Dallas, Richardson, TX, May, 2010.
- Sponsor for University of North Texas students’ team for Collegiate Cyber Defense Competition (CCDC), Delmar College, Corpus Christi, TX, 03/08.
- TUSSIDE (MEB-TUBITAK Turkish Industrial Delegation and Management Institute) Strategic Planning Workshop, Ege University, Izmir, Turkey, 06/05.
- An Advanced Course on Contemporary Cryptology, Universitat Politècnica de Catalunya, Barcelona, Spain, 02/04.
- Summer School on Elliptic Curve Essentials and Cryptography, Izmir Institute of High Technology, Izmir, Turkey, 09/03.
- Visiting researcher at University of Central Florida, FL, USA, 01-02/02.
- NATO Training Program, Brussels, Belgium, 12/98.
- Executive Manager Training Course, Izmir Chamber of Commerce, Izmir, Turkey, 11/96 – 03/97.

EDITORIAL BOARD:

- Journal of Computer Standards and Interfaces

MEMBERSHIPS:

- IEEE
- Izmir Turkish American Association
- Izmir French Culture Center.

LANGUAGES:

- English
- French
- Turkish

HOBBIES:

- Tennis, running, horseback riding, skiing, books on philosophy and psychology, cinema