

# A. Cüneyd TANTUĞ

## Curriculum Vitae

**Address:** Istanbul Technical University  
Computer and Informatics Faculty  
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### EDUCATION

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**Ph.D.** Istanbul Technical University 2002 – 2007  
*Thesis: “A Hybrid Model For Machine Translation Between Agglutinative and Related Languages”*

**M.Sc.** Istanbul Technical University 2000 - 2002  
*Thesis: “An Efficient Clustering Method For Customer Segmentation”*

**B.Sc.** Istanbul Technical University 1996 - 2000  
(Graduated as the 1<sup>st</sup> honor)

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### PROFESSIONAL EXPERIENCE

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Istanbul Technical University, Turkey 2017 –  
Assoc. Prof.

Istanbul Technical University, Turkey 2012 –  
Center for Information Technology, Director

Istanbul Technical University, Turkey 2010 – 2017  
Assist. Prof.

Istanbul Technical University, Turkey 2009 – 2010  
Lecturer

Turkish Army Forces 2008 - 2009  
Military Service (Naval Engineer Lieutenant)

Istanbul Technical University, Turkey 2007 – 2008  
Lecturer

Copenhagen University Center for Language Technology, Denmark 2006 – 2007  
Visiting Researcher

Istanbul Technical University, Turkey 2000 – 2006  
Research and Teaching Assistant

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## RESEARCH AREAS

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- Natural Language Processing
  - Computational Morphological Analysis, Machine Translation, Turkic Languages, Lexical Ambiguity Resolution
- Data Mining
  - Clustering Methods, Data warehouse Building, Designing OLAP Systems
- Pattern Recognition
  - Classification Methods and Applications, SPAM Recognition

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## PUBLICATIONS

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- Ülgen A., Velioglu H., **Tantuğ A.C.**, Digital Signage - İTÜ/Bilgi Ekranı, *Akademik Bilişim Konferansı*, Eskisehir, Turkey, 2015.
- Yıldız E., **Tantuğ A.C.**, Diri B., The Effect Of Parallel Corpus Quality vs Size In English-To-Turkish SMT, *International Conference on Computer Science, Engineering and Applications (ICCSEA-2014)*, **Chennai, India**, 2014.
- Yıldırım E., **Tantuğ A.C.**, Evaluation of Domain Adaptation Approaches to Improve The Translation Quality, *6th International Conference on Computational Collective Intelligence Technologies and Applications (ICCCI 2014)*, **Seoul, Korea**, 2014.
- Kavak Ö, **Tantuğ A.C.**, A comparative study on State Programming: Hierarchical State Machine (HSM) Pattern and State Pattern, *6th International Conference on Software Technology and Engineering (ICSTE 2014)*, **Paris, France**, 2014.
- Altintas M. , **Tantuğ A.C.**, Machine Learning Based Ticket Classification In Issue Tracking Systems, *2nd International Conference on Artificial Intelligence and Computer Science 2014 (AICS2014)*, **Bandung, Indonesia**, 2014.
- Türkmenoğlu, C., **Tantuğ A.C.**, Sentiment Analysis in Turkish Media, *Workshop on Issues of Sentiment Discovery and Opinion Mining*, **Beijing, China**, 2014.
- Yıldız E., **Tantuğ A.C.**, Diri B., İstatiksel Bilgisayarlı Çeviride Paralel Derlemin Büyüklüğünün ve Kalitesinin Etkileri, *Akıllı Sistemlerde Yenilikler ve Uygulamaları (ASYU-2014)*, **İzmir, Türkiye**, 2014.
- Ilgen B., Adali E., **Tantuğ A.C.**, A Comparative Study to Determine the Effective Window Size of Turkish Word Sense Disambiguation Systems, *28th International Symposium on Computer and Information Sciences*, **Paris, France**, 2013.

- Yıldırım E., **Tantuğ A.C.**, “The feasibility analysis of re-ranking for N-best lists on English-Turkish machine translation”, *IEEE International Symposium on Innovations in Intelligent Systems and Applications*, **Albena, Bulgaria**, 2013.
- **Tantuğ A.C.**, “Metin Sınıflandırma”, *Türkiye Bilişim Vakfı Bilgisayar Bilimleri Dergisi*, vol. 6(6), 2012 (in Turkish).
- Ilgen B., Adalı E., **Tantuğ A.C.**, Building up Lexical Sample Dataset for Turkish Word Sense Disambiguation, *IEEE International Symposium on Innovations in Intelligent Systems and Applications*, 2012.
- Yıldız E., **Tantuğ A.C.**, “Evaluation of Sentence Alignment Methods for English-Turkish Parallel Texts”, *First Workshop on Language Resources and Technologies for Turkic Languages, LREC2012*, Istanbul, Turkey, 2012.
- Ilgen B., Adalı E., **Tantuğ A.C.**, The impact of collocational features in Turkish Word Sense Disambiguation, *IEEE 16th International Conference on Intelligent Engineering Systems*, 2012.
- **Tantuğ A.C.**, “Document Categorization with Modified Statistical Language Models for Agglutinative Languages”, *International Journal on Computational Intelligence Systems*, vol. 5(3), 2010.
- **Tantuğ A.C.**, “A Probabilistic Mobile Text Entry System for Agglutinative Languages”, *IEEE Transactions on Consumer Electronics*, vol. 56(2), pp. 1018-1024, 2010.
- M. Orhun, **Tantuğ A. C.**, Adalı E., “Morphological Disambiguation Rules For Uyghur Language”, *IEEE International Conference on Software Engineering and Service Sciences (ICSESS)*, Beijing, China, 2010.
- M. Orhun, **Tantuğ A. C.**, Adalı E., “Rule Based Analysis of the Uyghur Nouns”, *International Journal of Asian Language Processing*, vol. 19(1), pp. 33-44, 2010.
- M. Orhun, **Tantuğ A. C.**, Adalı E., Sönmez C., “Computational Comparison of the Uyghur and Turkish Grammar”, *2<sup>nd</sup> IEEE International Conference on Computer Science and Information Technology (ICCSIT2009)*, Beijing, China, 2009.
- M. Orhun, **Tantuğ A. C.**, Adalı E., “Rule Based Tagging of the Uyghur Verbs”, *Fourth International Conference on Intelligent Computing and Information Systems*, Cairo, Egypt, 2009.
- M. Orhun, **Tantuğ A. C.**, Adalı E., “Rule Based Analysis of the Uyghur Nouns”, *International Conference on Asian Language Processing*, Chiang Mai, Thailand, 2008.
- **Tantuğ A.C.**, Adalı E., Oflazer K., “Türkmenceden Türkçeye Bilgisayarlı Metin Çevirisi”, *İTÜ Dergisi*, vol:7(4), pp. 83-94, 2008.

- Murat M., Adalı E., **Tantuğ A.C.**, “Uygur Dili ve Makineli Çeviri”, *Akademik Bilişim 2008*, Çanakkale, Turkey, 2008.
- **Tantuğ A.C.**, Oflazer K., Durgar El-Kahlout İ., “BLEU+ : A Fine Grained Tool for BLEU Computation”, *In Proceedings of Language Resources and Evaluation Conference LREC*, Morocco, 2008.
- **Tantuğ A.C.**, Adalı E., Oflazer K., “A MT System from Turkmen to Turkish Employing Finite State and Statistical Methods”, *In Proceedings of MT Summit XI*, Copenhagen, Denmark, 2007.
- **Tantuğ A.C.**, Adalı E., Oflazer K., “Machine Translation between Turkic Languages”, *In Proceedings of 45<sup>th</sup> Annual Meeting of Association for Computational Linguistics (ACL 2007) Companion Volume*, Prague, Czech Republic, 2007.
- **Tantuğ A.C.**, Adalı E., Oflazer K., “Lexical Ambiguity Resolution for Turkish in Direct Transfer Machine Translation Models”, *Proceedings of 21<sup>st</sup> International Symposium on Computer and Information Sciences (ISCIS), Lecture Notes in Computer Science*, vol. 4263, pp. 230-238, Springer, 2006.
- **Tantuğ A.C.**, Adalı E., Oflazer K., “Computer Analysis of The Turkmen Language Morphology”, *Proceedings of the 5th International Conference on Natural Language Processing, (FinTAL)*, Turku, Finland, *Lecture Notes in Computer Science*, vol. 4139, pp. 186-193, Springer. 2006.
- **Tantuğ, A.C.**, Eryigit G., “Performance Analysis of Naïve Bayes Classification, Support Vector Machines and Neural Networks For Spam Categorization”, *Applied Soft Computing Technologies: The Challenge of Complexity*, Springer, 2006.
- **Tantuğ A.C.**, Adalı E., Oflazer K., “A Prototype Machine Translation System Between Turkmen and Turkish”, *Proceedings of the Turkish Artificial Intelligence and Neural Networks (TAINN)*, Muğla, Turkey, 2006.
- Eryiğit, G., **Tantuğ, A.C.** and Adalı, E., “Yaramaz E-Postaların Süzülmesinde, Karar Destek Makineleri, Naive Bayes ve Bellek Tabanlı Öğrenme Yöntemlerinin Karşılaştırılması”, *Türkiye Bilişim Vakfı Bilgisayar Bilimleri ve Mühendisliği Dergisi*, vol. 1, pp.27-36, 2006.
- Eryiğit G., **Tantuğ, A.C.**, “A Comparison Of Support Vector Machines, Memory-Based And Naïve Bayes Techniques On Spam Recognition”, *The IASTED conference on Artificial Intelligence Applications (AIA)*, Innsbruck, Austria, 2004.
- **Tantuğ, A.C.**, Eryiğit G., “Probabilistic Turkish Word Root Generation”, *Proceedings of the 3rd Asia Pacific International Symposium on Information Technology (APIS)*, Istanbul, Turkey, 2004.
- **Tantuğ, A.C.**, Cebiroğlu, G., Adalı, E., Erenler, Y., “Synthetic Turkish Word Root Generation”, *Proceedings of the Turkish Artificial Intelligence and Neural Networks (TAINN)*,

Çanakkale, Turkey, 2003.

- **Tantuğ, A.C.,** Adalı, E., "Fast K-Means in Data Mining", *Bilisim Zirvesi 2002 Bildiriler Kitabı*, Istanbul, Turkey, 2002.

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## TEACHING

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- İTÜ Computer Engineering Department Graduate Program
  - Machine Translation (*Spring 2010, Spring 2011, Spring 2012, Spring 2014*)
- İTÜ Information Technologies Graduate Program
  - Database Systems (*Fall 2007, Fall 2009, Fall 2010, Fall 2011, Fall 2012, Fall 2013, Fall 2014*)
- İTÜ Computer Engineering Department Undergraduate Program
  - Software Engineering (*Fall 2007, Fall 2010, Fall 2011*)
  - Software Quality and Testing (*Fall 2012*)
  - Object Oriented Programming (*Spring 2008, Fall 2009, Spring 2010*)
  - Microprocessor Applications Laboratory (*Spring 2008*)
  - Intro. To Inf. Sys. & Comp. Eng. (*Fall 2009, Fall 2010*)
  - Intro. To Sci. & Eng. Comp. (*Spring 2010*)
- İTÜ Information Systems Engineering Undergraduate Program
  - Operating Systems (*Fall 2010, Fall 2011*)
  - Database Systems (*Spring 2011, Spring 2012*)
  - Programming II (*Spring 2010, Summer 2010*)
- İTÜ Computer Engineering Department Undergraduate Program - Courses Assisted
  - Database Systems (*Fall 2005*)
  - Microprocessors (*Spring 2001-2005, Summer 2004*)
  - Real Time Systems (*Fall 2004*)
  - Computer Architecture (*Fall 2001*)
  - Software Engineering (*Fall 2004*)
  - Microprocessor Applications Lab. (*Fall 2003*)
  - Microprocessors Lab. (*Fall 2002-2006*)
  - Operating Systems (*Spring 2004*)
  - File Organization (*Fall 2003*)
  - Intro. To Sci. & Eng. Comp. (*Spring 2005*)

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## RESEARCH PROJECTS

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- **English To Turkish Machine Translation Project** 2010 –
  - Project Manager
  - Supported by The Republic of Turkey Ministry of Development under grant number TD14
  
- **Parsing WEB 2.0 Sentences** 2013 – 2014
  - Researcher
  - Supported by TÜBİTAK (National Science Foundation of Turkey) under grant number 112E276
  
- **User Experience Center** 2012 – 2013
  - Researcher
  - Supported by İSTKA (Istanbul Development Agency)
  
- **Historical Corpus of Old Turkish and Karahan Turkish** 2010 – 2013
  - Researcher
  - Supported by TÜBİTAK (National Science Foundation of Turkey) under grant number 110K048
  
- **Design of an MT System Between Turkmen and Turkish** 2006 – 2009
  - This project aims the design of a machine translation system between Turkmen Language to Turkish. This project includes the steps of building and investigating the proper methods and tools, generating linguistic materials (bi-lingual dictionaries, morphological analyzers, language models for statistical ambiguity resolution methods and etc.)
  - Supported by TÜBİTAK (National Science Foundation of Turkey) under grant number 106E048
  
- **Customer Segmentation Software Project** 2000 – 2002
  - Implemented for one of the biggest banks in Turkey for customer segmentation using a customer datawarehouse
  - Technologies: C++, DB2, Intelligent Miner

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## OTHER PROJECTS

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- **Remote Monitoring and Control of GSM Base Stations** 2010 – 2013
  - This project is supported by The Turkish Ministry of Industry and Trade and Turkish Small & Medium Enterprises Development Organization.
  
- **Motorola Custom Performance Statistics Solution** 2008
  - A customized data structure for clustered network and reliable data loading with an application optimized for fast navigation
  - Technologies: Perl, Oracle 10i, Delphi
  
- **K@Plan –ERP Software** 2002 – 2004
  - An enterprise resource planning (including MRP-2) software for knitting
  - Technologies: Delphi, ADO, SQL Server 2000

- **Electronic Data Interchange (EDI) Over VPN** 2000 – 2003
  - Implemented EDI systems for connecting 155 headquarters of the Turkey’s biggest tobacco company
  - Technologies: Delphi, Oracle 8i
- **Istanbul Technical University Dormitory Management Software** 2002 – 2003
  - A database application which is used in 7 different dormitories of ITU for the administration of dormitories (student information, payments, room planning, etc.)
  - Technologies: 4D RDBMS
- **Cukurova University Research Projects Supporting Department** 1996
  - A software for keep tracking of research projects in Cukurova University (expenses, reports, stuff, materials, etc.)
  - Technologies: 4D RDBMS

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## PROFESSIONAL ACTIVITIES

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- Vice Dean, ITU Computer and Informatics Faculty, 2011-
- Founder of the start-up company TelcomIT, 2010-
- The Seventeenth IEEE Symposium on Computers and Communication (ISCC’12), 2012, Publication Chair
- TestIstanbul Conference, 2012, Programme Committee Member
- First Workshop on Language Resources and Technologies for Turkic Languages 2012, Reviewer
- LREC 2012, Local Committee Member
- ACL 2010 Student Research Workshop 2010, Reviewer
- TÜBİTAK Turkish Journal Of Electrical Engineering & Computer Sciences, 2010, Reviewer
- TÜBİTAK – TEYDEB 2009-2010, Project Reviewer
- International Conference On Electrical And Electronics Engineering, ELECO 2009, Reviewer
- International Symposium on Computer and Information Sciences ISCIS 2008, Reviewer
- ACL 2008 Student Research Workshop Reviewer, 2008
- II. Computational Linguistics Workshop, 2006, Istanbul, Organizing Committee Member
- The Third Asia Pacific International Symposium on Information Technology, 2004, Organization Committee Member
- The Third Asia Pacific International Symposium on Information Technology, 2004, Reviewer

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## MEMBERSHIPS

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- ACL Member (The Association for Computational Linguistics)
- IEEE Member
- İTÜ Natural Language Processing Group, Founding Member
- İTÜ Computer Engineering Department Alumni Commission Member

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## HONORS

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- Siemens Excellency Award 2007
- Garanti Technology Postgraduate Scholarship (for 2 years) 2000
- Bedri Karafakioglu Special Award, ITU 2000
- Northern Telecom – NETAS, Success Grant 1999

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## INVITED TALKS

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- Title : Natural Language Processing and Turkish  
Bilgi University, Istanbul, Turkey, December 2009
- Title : Machine Translation  
Bilgi University, Istanbul, Turkey, November 2007
- Title : Computer Processing of Turkish  
Copenhagen University Center for Language Technology, Copenhagen, Denmark, 12.11.2006
- Title : Machine Translation and Turkic Languages  
II. Computational Linguistics Workshop, Istanbul, Turkey, 10.06.2006

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## LANGUAGES

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- Turkish (Native)
- English (Advanced)
- German (Introductory)

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## TECHNICAL SKILLS

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Programming Languages: Perl, C/C++, Java, Delphi, MatLAB  
Database Systems: Oracle, SQL Server, 4<sup>th</sup> Dimension  
Tools Used Professionally: Xerox Finite State Toolkits, CMU-Cambridge SLM Toolkit, GATE, Macromedia Dreamweaver, Fireworks, Adobe Photoshop,