

Ion (Ioannis) Androutsopoulos
Curriculum Vitae

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1. CONTACT INFORMATION

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2. RESEARCH INTERESTS

Artificial Intelligence, especially **natural language processing**, and particularly:

- **question answering** for databases, ontologies, document collections, and the Web,
- **natural language generation** from databases and ontologies, especially Semantic Web ontologies,
- **text classification**, including filtering spam and abusive content,
- **information extraction** and **opinion mining**, including sentiment analysis,
- **natural language processing tools** for Greek, for example part-of-speech taggers and named-entity recognizers,
- **machine learning** in natural language processing, especially **deep learning** methods,
- natural language processing in **digital curation**.

3. STUDIES

1992–96: Department of Artificial Intelligence, University of Edinburgh, U.K. **PhD in Artificial Intelligence**. Thesis title: *A Principled Framework for Constructing Natural Language Interfaces to Temporal Databases*. Scholarship from the Greek State Scholarships Foundation.

1991–92: Department of Artificial Intelligence, University of Edinburgh, U.K. **MSc in Information Technology/Knowledge-Based Systems**, Natural Language Processing theme. (Official graduation: 1994). Grade: distinction (excellent). Dissertation title: *Interfacing a Natural Language Front-End to a Relational Database*. Dissertation grade: A (excellent).

1986–91: Department of Electrical Engineering, National Technical University of Athens, Greece. “**Diploma**” in **Electrical Engineering** (5-year MSc-level studies), Computer Engineering theme. Grade: 9.06/10 (excellent). Dissertation title: *Construction of a Lexical and Syntax Analyzer for Modern Greek*. Dissertation grade: 10/10 (excellent). Arthur Andersen award for the highest grade among the 1991 graduates of the Computer Engineering theme of NTUA’s Department of Electrical Engineering.

4. WORK EXPERIENCE

2013–present: Associate Professor (tenured), Department of Informatics, Athens University of Economics and Business (AUEB).

2007–2013: Assistant Professor (tenured since 2011), Department of Informatics, Athens University of Economics and Business (AUEB).

2002–2007: Lecturer, Department of Informatics, AUEB.

2000–02: Post-doctoral Fellow, Software and Knowledge Engineering Laboratory, Institute of Informatics and Telecommunications, NCSR “Demokritos”.

1998–2000: Research Associate, Software and Knowledge Engineering Laboratory, Institute of Informatics and Telecommunications, NCSR “Demokritos”.

1997–98: Military service (18 months), Hellenic Army. Specialty: Computer Programmer.

1996–97: Research Scientist, Language Technology Group, Microsoft Research Institute, Macquarie University, Sydney, Australia.

5. TEACHING EXPERIENCE

5.1 Undergraduate courses

- *Artificial Intelligence* (2002–03 to 2013–14, 2015–16 to present). Dept. of Informatics, AUEB.
- *Human-Computer Interaction* (2002–03, 2013–14 to present). Dept. of Informatics, AUEB.
- *Computer Programming in C++* (2001–02 to 2008–09, 2011–12, 2012–13). Dept. of Informatics, AUEB.

5.2 Graduate courses

- *Language Technology* (2010–11 to present). MSc “Information Systems” and MSc “Computer Science”, Dept. of Informatics, AUEB.
- *Text Engineering and Analytics* (2015–16 to present). MSc “Data Science”, Dept. of Informatics, AUEB.
- *Social Network Analysis and Social Media Analytics* (2015–16). MSc “Business Analytics”, Dept. of Management Science and Technology, AUEB. Jointly with G. Giaglis and H. Papageorgiou.
- *Logic and Artificial Intelligence* (2003–04 to 2012–13). MSc “Computer Science”, Dept. of Informatics, AUEB.

6. PUBLICATIONS

6.1 Books

B1. I. Androutsopoulos, *Exploring Time, Tense and Aspect in Natural Language Database Interfaces*, John Benjamins, 2002.

6.2 Journal articles

J12. G. Tsatsaronis¹, G. Balikas, P. Malakasiotis, I. Partalas, M. Zschunke, M.R. Alvers, D. Weissenborn, A. Krithara, S. Petridis, D. Polychronopoulos, Y. Almirantis, J. Pavlopoulos, N. Baskiotis, P. Gallinari, T. Artiéres, A. Ngonga, N. Heino, E. Gaussier, L. Barrio-Alvers, M. Schroeder, I. Androutsopoulos and G. Paliouras, “An Overview of the BioASQ Large-Scale Biomedical Semantic Indexing and Question Answering Competition”. *BMC Bioinformatics*, 16:138, 2015.

- J11.** A. Kosmopoulos, I. Partalas, E. Gaussier, G. Paliouras, and I. Androutsopoulos, “Evaluation Measures for Hierarchical Classification: a Unified View and Novel Approaches”. *Data Mining and Knowledge Discovery*, 29:820–865, Springer, 2015.
- J10.** I. Androutsopoulos, G. Lampouras and D. Galanis, “Generating Natural Language Descriptions from OWL Ontologies: the NaturalOWL System”. *Journal of Artificial Intelligence Research*, 48:671–715, 2013.
- J9.** I. Androutsopoulos and P. Malakasiotis, “A Survey of Paraphrasing and Textual Entailment Methods”. *Journal of Artificial Intelligence Research*, 38:135–187, 2010.
- J8.** P. Constantopoulos, C. Dallas, I. Androutsopoulos, S. Angelis, A. Deligiannakis, D. Gavrilis, Y. Kotidis and C. Papatheodorou, “DCC&U: An Extended Digital Curation Lifecycle Model”. *International Journal of Digital Curation*, 1(4):34–45, 2009.
- J7.** E.F. Mageirou, D.K. Vassilakis and I. Androutsopoulos, “Teaching Nonzero Sum Games Using a Diagrammatic Determination of Equilibria”. *INFORMS Transactions on Education*, 8(3):115–124, 2008.
- J6.** G. Lucarelli, X. Vasilakos and I. Androutsopoulos, “Named Entity Recognition in Greek Texts with an Ensemble of Support Vector Machines and Active Learning”. *International Journal on Artificial Intelligence Tools*, 16(6):1015–1045, World Scientific, 2007.
- J5.** I. Androutsopoulos, J. Oberlander and V. Karkaletsis, “Source Authoring for Multilingual Generation of Personalised Object Descriptions”. *Natural Language Engineering*, 13(3):191–233, Cambridge University Press, 2007.
- J4.** A. Isard, J. Oberlander, I. Androutsopoulos and C. Matheson, “Speaking the Users’ Languages”. *IEEE Intelligent Systems*, special issue on Advances in Natural Language Processing, 18(1):40–45, 2003.
- J3.** G. Sakkis, I. Androutsopoulos, G. Paliouras, V. Karkaletsis, C.D. Spyropoulos and P. Stamatopoulos, “A Memory-Based Approach to Anti-Spam Filtering for Mailing Lists”. *Information Retrieval*, 6(1):49–73, Kluwer, 2003.
- J2.** I. Androutsopoulos, G.D. Ritchie and P. Thanisch, “Time, Tense and Aspect in Natural Language Database Interfaces”. *Natural Language Engineering*, 4(3): 229–276, Cambridge University Press, 1998.
- J1.** I. Androutsopoulos, G.D. Ritchie and P. Thanisch, “Natural Language Interfaces to Databases – An Introduction”. *Natural Language Engineering*, 1(1):29–81, Cambridge University Press, 1995.

6.3 Book chapters

- K3.** J. Calder, A.C. Melengoglou, C. Callaway, E. Not, F. Pianesi, I. Androutsopoulos, C.D. Spyropoulos, G. Xydas, G. Kouroupetroglou and M. Roussou, “Multilingual Personalized Information Objects”. In O. Stock and M. Zancanaro (Eds.), *Multimodal Intelligent Information Presentation*, pp. 177–201, Springer, 2005.
- K2.** I. Androutsopoulos and M. Aretoulaki, “Natural Language Interaction”. Chapter 35 in R. Mitkov (Ed.), *Handbook of Computational Linguistics*, pp. 629–649, Oxford University Press, 2003.

K1. I. Androutsopoulos and G.D. Ritchie, “Database Interfaces”. Chapter 9 in R. Dale, H. Moisl and H. Somers (Eds.), *Handbook of Natural Language Processing*, pp. 209–240, Marcel Dekker, 2000.

6.4 Conference articles (peer reviewed)

C61. R. McDonald, G. Brokos and I. Androutsopoulos, “Deep Relevance Ranking Using Enhanced Document-Query Interactions”. Proceedings of the *Conference on Empirical Methods in Natural Language Processing (EMNLP 2018)*, Brussels, Belgium, 2018.

C60. G. Brokos, P. Liosis, R. McDonald, D. Pappas and I. Androutsopoulos, “AUEB-NLP at BioASQ 6: Document and Snippet Retrieval”. Proceedings of the workshop *BioASQ: Large-scale Biomedical Semantic Indexing and Question Answering*, at the *Conference on Empirical Methods in Natural Language Processing (EMNLP 2018)*, Brussels, Belgium, 2018.

C59. V. Pertsas, P. Constantopoulos and I. Androutsopoulos, “Ontology Driven Extraction of Research Processes”. Proceedings of the *17th International Semantic Web Conference (ISWC 2018)*, Monterey, CA, USA, 2018.

C58. I. Chalkidis, I. Androutsopoulos and A. Michos, “Obligation and Prohibition Extraction Using Hierarchical RNNs”. Proceedings of the *56th Annual Meeting of the Association for Computational Linguistics (ACL 2018)*, Melbourne, Australia, pp. 254–259 (short papers), 2018.

C57. D. Pappas, I. Androutsopoulos and H. Papageorgiou, “BioRead: A New Dataset for Biomedical Reading Comprehension”. Proceedings of the *11th Language Resources and Evaluation Conference (LREC 2018)*, Miyazaki, Japan, pp. 2771–2776, 2018.

C56. M. Vougioukas, I. Androutsopoulos and G. Paliouras, “Identifying Retweetable Tweets with a Personalized Global Classifier”. Proceedings of the *10th Hellenic Conference on Artificial Intelligence (SETN 2018)*, Patras, 2018.

C55. I. Chalkidis and I. Androutsopoulos, “A Deep Learning Approach to Contract Element Extraction”. Proceedings of the *30th International Conference on Legal Knowledge and Information Systems (JURIX 2017)*, pp. 155–164, Luxembourg, 2017.

C54. J. Pavlopoulos, P. Malakasiotis and I. Androutsopoulos, “Deeper Attention to Abusive User Content Moderation”. Proceedings of the *Conference on Empirical Methods in Natural Language Processing (EMNLP 2017)*, Copenhagen, Denmark, pp. 1136–1146, 2017.

C53. J. Pavlopoulos, P. Malakasiotis, J. Bakagianni and I. Androutsopoulos, “Improved Abusive Comment Moderation with User Embeddings”. Proceedings of the workshop *Natural Language Processing Meets Journalism*, at the *Conference on Empirical Methods in Natural Language Processing (EMNLP 2017)*, Copenhagen, Denmark, pp. 51–55, 2017.

C52. J. Pavlopoulos, P. Malakasiotis and I. Androutsopoulos, “Deep Learning for User Comment Moderation”. Proceedings of the *1st Workshop on Abusive Language Online (ALW1)*, at the *55th Annual Meeting of the Association for Computational Linguistics (ACL 2017)*, Vancouver, Canada, pp. 25–35, 2017.

C51. M. Vougioukas, I. Androutsopoulos and G. Paliouras, “A Personalized Global Filter To Predict Retweets”. Proceedings of the *25th Conference on User Modeling, Adaptation and Personalization (UMAP 2017)*, Bratislava, Slovakia, pp. 393–394, 2017.

- C50.** I. Chalkidis, I. Androutsopoulos and A. Michos, “Extracting Contract Elements”. Proceedings of the *16th International Conference on Artificial Intelligence and Law (ICAIL 2017)*, London, UK, pp. 19–28, 2017.
- C49.** G. Brokos, P. Malakasiotis and I. Androutsopoulos, “Using Centroids of Word Embeddings and Word Mover's Distance for Biomedical Document Retrieval in Question Answering”. Proceedings of the *15th Workshop on Biomedical Natural Language Processing (BioNLP 2016)*, at the *54th Annual Meeting of the Association for Computational Linguistics (ACL 2016)*, Berlin, Germany, pp. 114–118, 2016.
- C48.** M. Pontiki, D. Galanis, H. Papageorgiou, I. Androutsopoulos, S. Manandhar, M. AL-Smadi, M. Al-Ayyoub, Y. Zhao, B. Qin, O. De Clercq, V. Hoste, M. Apidianaki, X. Tannier, N. Loukachevitch, E. Kotelnikov, N. Bel, S.M. Jiménez-Zafra and G. Eryigit, “SemEval-2016 Task 5: Aspect Based Sentiment Analysis”. Proceedings of the *10th International Workshop on Semantic Evaluation (SemEval 2016)*, San Diego, CA, USA, pp. 19-30, 2016.
- C47.** S. Giorgis, A. Rousas, J. Pavlopoulos, P. Malakasiotis and I. Androutsopoulos, “aueb.twitter.sentiment at SemEval-2016 Task 4: A Weighted Ensemble of SVMs for Twitter Sentiment Analysis”. Proceedings of the *10th International Workshop on Semantic Evaluation (SemEval 2016)*, San Diego, CA, USA, pp. 96–99, 2016.
- C46.** D. Xenos, P. Theodorakakos, J. Pavlopoulos, P. Malakasiotis and I. Androutsopoulos, “AUEB-ABSA at SemEval-2016 Task 5: Supervised Machine Learning for Aspect Based Sentiment Analysis”. Proceedings of the *10th International Workshop on Semantic Evaluation (SemEval 2016)*, San Diego, CA, USA, pp. 324–329, 2016.
- C45.** D. Pappas, I. Androutsopoulos and H. Papageorgiou, “Anger Detection in Call Center Dialogues”. Proceedings of the *6th IEEE Conference on Cognitive Infocommunications (CogInfoCom 2015)*, Győr, Hungary, 2015.
- C44.** P. Malakasiotis, E. Archontakis, I. Androutsopoulos, D. Galanis and H. Papageorgiou, “Biomedical Question-Focused Multi-document Summarization: ILSP and AUEB at BioASQ3”. Proceedings of the *QA Lab of the 6th Conference and Labs of the Evaluation Forum (CLEF 2015)*, Toulouse, France, 2015.
- C43.** M. Pontiki, D. Galanis, H. Papageorgiou, S. Manandhar and I. Androutsopoulos, “SemEval-2015 Task 12: Aspect Based Sentiment Analysis”. Proceedings of the *9th International Workshop on Semantic Evaluation (SemEval 2015)*, at the *Conference of the North American Chapter of the Association for Computational Linguistics – Human Language Technologies (NAACL HLT 2015)*, Denver, Colorado, USA, pp. 486–495, 2015.
- C42.** A. Kosmopoulos, G. Paliouras and I. Androutsopoulos, “The Effect of Dimensionality Reduction on Large Scale Hierarchical Classification”. Proceedings of the *5th Conference and Labs of the Evaluation Forum (CLEF 2014)*, Sheffield, UK, pp. 160–171, 2014.
- C41.** M. Pontiki, D. Galanis, J. Pavlopoulos, H. Papageorgiou, I. Androutsopoulos and S. Manandhar, “SemEval-2014 Task 4: Aspect Based Sentiment Analysis”. Proceedings of the *8th International Workshop on Semantic Evaluation (SemEval 2014)*, at the *25th International Conference on Computational Linguistics (COLING 2014)*, Dublin, Ireland, pp. 27–35, 2014.
- C40.** J. Pavlopoulos and I. Androutsopoulos, “Multi-Granular Aspect Aggregation in Aspect-Based Sentiment Analysis”. Proceedings of the *14th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2014)*, Gothenburg, Sweden, pp.78–87, 2014.

- C39.** J. Pavlopoulos and I. Androutsopoulos, “Aspect Term Extraction for Sentiment Analysis: New Datasets, New Evaluation Measures and an Improved Unsupervised Method”. Proceedings of the *5th Workshop on Language Analysis for Social Media (LASM 2014)*, *14th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2014)*, Gothenburg, Sweden, pp. 44–52, 2014.
- C38.** G. Lampouras and I. Androutsopoulos, “Using Integer Linear Programming in Concept-to-Text Generation to Produce More Compact Texts”. Proceedings of the *51st Annual Meeting of the Association for Computational Linguistics (ACL 2013)*, Sofia, Bulgaria, pp. 561–566 (short papers), 2013.
- C37.** G. Lampouras and I. Androutsopoulos, “Using Integer Linear Programming for Content Selection, Lexicalization, and Aggregation to Produce Compact Texts from OWL Ontologies”. Proceedings of the *14th European Workshop on Natural Language Generation (ENLG 2013)*, at the *51st Annual Meeting of the Association for Computational Linguistics (ACL 2013)*, Sofia, Bulgaria, pp. 51–60, 2013.
- C36.** D. Galanis, G. Lampouras and I. Androutsopoulos, “Extractive Multi-Document Summarization with Integer Linear Programming and Support Vector Regression”. Proceedings of the *24th International Conference on Computational Linguistics (COLING 2012)*, Mumbai, India, 2012.
- C35.** G. Tsatsaronis, M. Schroeder, G. Paliouras, Y. Almirantis, I. Androutsopoulos, E. Gaussier, P. Gallinari, T. Artieres, M. Alvers, M. Zschunke and A. Ngonga, “BioASQ: A Challenge on Large-Scale Biomedical Semantic Indexing and Question Answering”. Proceedings of the *AAAI Fall Symposium on Information Retrieval and Knowledge Discovery in Biomedical Text*, Arlington, VA, USA, pp. 92–98, 2012.
- C34.** V. Panagiotopoulou, I. Varlamis, I. Androutsopoulos and G. Tsatsaronis, “Word Sense Disambiguation as an Integer Linear Programming Problem”. Proceedings of the *7th Hellenic Conference on Artificial Intelligence (SETN 2012)*, Lamia, Greece, pp. 33–40, 2012.
- C33.** P. Malakasiotis and I. Androutsopoulos, “A Generate and Rank Approach to Sentence Paraphrasing”. Proceedings of the *Conference on Empirical Methods on Natural Language Processing (EMNLP 2011)*, Edinburgh, UK, pp. 96–106, 2011.
- C32.** D. Galanis and I. Androutsopoulos, “A New Sentence Compression Dataset and Its Use in an Abstractive Generate-and-Rank Sentence Compressor”. Proceedings of the *Language Generation and Evaluation Workshop (UCNLG+Eval)*, at the *Conference on Empirical Methods on Natural Language Processing (EMNLP 2011)*, Edinburgh, UK, pp. 1–11, 2011.
- C31.** D. Galanis and I. Androutsopoulos, “An Extractive Supervised Two-Stage Method for Sentence Compression”. Proceedings of *Human Language Technologies: The 11th Annual Conference of the North American Chapter of the Association for Computational Linguistics (HLT-NAACL 2010)*, Los Angeles, CA, USA, pp. 885–893, 2010.
- C30.** G. Lampouras and I. Androutsopoulos, “Finding Short Definitions of Terms on Web Pages”. Proceedings of the *2009 Conference on Empirical Methods in Natural Language Processing (EMNLP 2009)*, Suntec, Singapore, pp. 1270–1279, 2009.
- C29.** D. Vogiatzis, D. Galanis, V. Karkaletsis, I. Androutsopoulos and C.D. Spyropoulos, “A Conversant Robotic Guide to Art Collections”. Proceedings of the *2nd Workshop on Language Technology for Cultural Heritage Data, 6th International Conference on Language Resources and Evaluation (LREC 2008)*, Marrakech, Morocco, 2008.

- C28.** J. Oberlander, G. Karakatsiotis, A. Isard and I. Androutsopoulos, “Building an Adaptive Museum Gallery in Second Life”. Proceedings of *Museums and the Web*, Montreal, Quebec, Canada, 2008.
- C27.** P. Malakasiotis and I. Androutsopoulos, “Learning Textual Entailment using SVMs and String Similarity Measures”. Proceedings of the *ACL-PASCAL Workshop on Textual Entailment and Paraphrasing, 45th Annual Meeting of the Association for Computational Linguistics (ACL 2007)*, Prague, Czech Republic, pp. 42–47, 2007.
- C26.** D.K. Vassilakis, I. Androutsopoulos and E.F. Mageirou, “A Game-Theoretic Investigation of the Effect of Human Interactive Proofs on Spam E-mail”. Proceedings of the *4th Conference on Email and Anti-Spam (CEAS 2007)*, Microsoft Research Silicon Valley, Mountain View, CA, USA, 2007.
- C25.** D. Galanis and I. Androutsopoulos, “Generating Multilingual Descriptions from Linguistically Annotated OWL Ontologies: the NaturalOWL System”. Proceedings of the *11th European Workshop on Natural Language Generation (ENLG 2007)*, Schloss Dagstuhl, Germany, pp. 143–146, 2007.
- C24.** G. Tsatsaronis, M. Vazirgiannis and I. Androutsopoulos, “Word Sense Disambiguation with Spreading Activation Networks Generated from Thesauri”. Proceedings of the *20th International Joint Conference on Artificial Intelligence (IJCAI 2007)*, Hyderabad, India, pp. 1725-1730, 2007.
- C23.** V. Metsis I. Androutsopoulos and G. Paliouras, “Spam Filtering with Naive Bayes – Which Naive Bayes?”. Proceedings of the *3rd Conference on Email and Anti-Spam (CEAS 2006)*, Microsoft Research Silicon Valley, Mountain View, CA, USA, 2006.
- C22.** G. Lucarelli and I. Androutsopoulos, “A Greek Named-Entity Recognizer that Uses Support Vector Machines and Active Learning”. Proceedings of the *4th Hellenic Conference on Artificial Intelligence (SETN 2006)*, Herakleion, Crete, Greece, 2006.
- C21.** I. Androutsopoulos and D. Galanis, “A Practically Unsupervised Learning Method to Identify Single-Snippet Answers to Definition Questions on the Web”. Proceedings of the *Human Language Technology Conference and the Conference on Empirical Methods in Natural Language Processing (HLT/EMNLP 2005)*, Vancouver, Canada, pp. 323–330, 2005.
- C20.** I. Androutsopoulos, E.F. Mageirou and D.K. Vassilakis, “A Game Theoretic Model of Spam E-Mailing”. Proceedings of the *2nd Conference on Email and Anti-Spam (CEAS 2005)*, Stanford University, CA, USA, 2005.
- C19.** I. Androutsopoulos, S. Kallonis and V. Karkaletsis, “Exploiting OWL Ontologies in the Multilingual Generation of Object Descriptions”. Proceedings of the *10th European Workshop on Natural Language Generation (ENLG 2005)*, Aberdeen, UK, pp. 150–155, 2005.
- C18.** S. Miliaraki and I. Androutsopoulos, “Learning to Identify Single-Snippet Answers to Definition Questions”. Proceedings of the *20th International Conference on Computational Linguistics (COLING 2004)*, Geneva, Switzerland, pp. 1360– 1366, 2004.
- C17.** E. Michelakis, I. Androutsopoulos, G. Paliouras, G. Sakkis and P. Stamatopoulos, “Filtron: A Learning-Based Anti-Spam Filter”. Proceedings of the *1st Conference on Email and Anti-Spam (CEAS 2004)*, Mountain View, CA, USA, 2004.

- C16.** A. Dimitromanolaki and I. Androutsopoulos, “Learning to Order Facts for Discourse Planning in Natural Language Generation”. Proceedings of the *9th European Workshop on Natural Language Generation, 10th Conference of the European Chapter of the Association for Computational Linguistics* (EACL 2003), Budapest, Hungary, pp. 23–30, 2003.
- C15.** I. Androutsopoulos, D. Spiliotopoulos, K. Stamatakis, A. Dimitromanolaki, V. Karkaletsis and C.D. Spyropoulos, “Symbolic Authoring for Multilingual Natural Language Generation”. In I.P. Vlahavas and C.D. Spyropoulos (Eds.), *Methods and Applications of Artificial Intelligence* (proceedings of the *2nd Hellenic Conference on Artificial Intelligence – SETN 2002*), Thessaloniki, Greece, pp. 131–142. Lecture Notes in Artificial Intelligence 2308, Springer, 2002.
- C14.** G. Petasis, V. Karkaletsis, G. Paliouras, I. Androutsopoulos and C.D. Spyropoulos, “Ellogon: A New Text Engineering Platform”. Proceedings of the *3rd International Conference on Language Resources and Evaluation* (LREC 2002), Las Palmas, Canary Islands, Spain, pp. 72–78, 2002.
- C13.** G. Petasis, V. Karkaletsis, D. Farmakiotou, I. Androutsopoulos and C.D. Spyropoulos, “A Greek Morphological Lexicon and its Exploitation by a Greek Controlled Language Checker”. Proceedings of the *8th Panhellenic Conference in Informatics* (EPY 2001), Nicosia, Cyprus, vol. 1, pp. 80–89, 2001.
- C12.** G. Sakkis, I. Androutsopoulos, G. Paliouras, V. Karkaletsis, C.D. Spyropoulos and P. Stamatopoulos, “Stacking Classifiers for Anti-Spam Filtering of E-Mail”. Proceedings of the *6th Conference on Empirical Methods in Natural Language Processing* (EMNLP 2001), pp. 44–50, Carnegie Mellon University, Pittsburgh, USA, 2001.
- C11.** I. Androutsopoulos, J. Koutsias, K.V. Chandrinos and C.D. Spyropoulos, “An Experimental Comparison of Naive Bayesian and Keyword-Based Anti-Spam Filtering with Personal E-Mail Messages”. Proceedings of the *23rd Annual International ACM SIGIR Conference on Research and Development in Information Retrieval* (SIGIR 2000), Athens, Greece, pp. 160–167, 2000.
- C10.** I. Androutsopoulos and R. Dale, “Selectional Restrictions in HPSG”. Proceedings of the *18th International Conference on Computational Linguistics* (COLING 2000), Saarbrücken, Germany, pp. 15–20, 2000.
- C9.** I. Androutsopoulos, J. Koutsias, K.V. Chandrinos, G. Paliouras and C.D. Spyropoulos, “An Evaluation of Naive Bayesian Anti-Spam Filtering”. Proceedings of the *Workshop on Machine Learning in the New Information Age, 11th European Conference on Machine Learning* (ECML 2000), Barcelona, Spain, pp. 9–17, 2000.
- C8.** I. Androutsopoulos, G. Paliouras, V. Karkaletsis, G. Sakkis, C.D. Spyropoulos and P. Stamatopoulos, “Learning to Filter Spam E-mail: A Comparison of a Naive Bayesian and a Memory Based-Approach”. Proceedings of the *Workshop on Machine Learning and Textual Information Access, 4th European Conference on Principles and Practice of Knowledge Discovery in Databases* (PKDD 2000), Lyon, France, pp. 1–13, 2000.
- C7.** K.V. Chandrinos, I. Androutsopoulos, G. Paliouras and C.D. Spyropoulos, “Automatic Web Rating: Filtering Obscene Content on the Web”. Proceedings of the *4th European Conference on Research and Advanced Technology for Digital Libraries* (ECDL 2000), Lisbon, Portugal, pp. 403–406, 2000.
- C6.** G. Paliouras, V. Karkaletsis, I. Androutsopoulos and C.D. Spyropoulos, “Learning Rules for Large-Vocabulary Word Sense Disambiguation: a Comparison of Various Classifiers”.

Proceedings of the *2nd International Conference on Natural Language Processing (NLP 2000)*, Patra, Greece. Lecture Notes in Artificial Intelligence, 1835, pp. 383–394, Springer, 2000.

C5. I. Androutsopoulos, “Temporal Meaning Representations in a Natural Language Front-End”. In M. Gergatsoulis and P. Rondogiannis (Eds.), *Intensional Programming II* (Proceedings of the *12th International Symposium on Languages for Intensional Programming*, Athens, 1999), pp. 197–213, World Scientific, 2000.

C4. G. Petasis, G. Paliouras, V. Karkaletsis, C.D. Spyropoulos and I. Androutsopoulos, “Resolving Part-of-Speech Ambiguity in the Greek Language Using Learning Techniques”. *Machine Learning in Human Language Technology* (Proceedings of the ACAI Workshop), N. Fakotakis et al. (Eds.), pp. 29–34, Chania, Greece, 1999.

C3. I. Androutsopoulos, G.D. Ritchie and P. Thanisch, “A Framework for Natural Language Interfaces to Temporal Databases”. Proceedings of the *20th Australasian Computer Science Conference*, Sydney, Australia. Australian Computer Science Communications, 19(1):307–315, 1997.

C2. I. Androutsopoulos, G.D. Ritchie and P. Thanisch, “Experience Using TSQL2 in a Natural Language Interface”. In J. Clifford and A. Tuzhilin (Eds.), *Recent Advances in Temporal Databases* (Proceedings of the *International Workshop on Temporal Databases*, Zurich, Switzerland), pp. 113–132. Springer-Verlag, Workshops in Computing Series, 1995.

C1. I. Androutsopoulos, G.D. Ritchie and P. Thanisch, “MASQUE/SQL: an Efficient and Portable Natural Language Query Interface for Relational Databases”. Proceedings of the *6th International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems*, pp. 327–330, Edinburgh, UK, 1993.

6.5 System demonstrations at conferences

S5. D. Galanis, G. Karakatsiotis, G. Lampouras and I. Androutsopoulos, “An Open-Source Natural Language Generator for OWL Ontologies and its Use in Protégé and Second Life”. System demonstration, *12th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2009)*, Athens, Greece, 2009.

S4. S. Konstantopoulos, A. Tegos, D. Bilidas, I. Androutsopoulos, G. Lampouras, P. Malakasiotis, C. Matheson and O. Deroo, “Adaptive Natural Language Interaction”. System demonstration, *12th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2009)*, Athens, Greece, 2009.

S3. G. Karakatsiotis, D. Galanis, G. Lampouras and I. Androutsopoulos, “NaturalOWL: Generating Texts from OWL Ontologies in Protege and in Second Life”. System demonstration, *18th European Conference on Artificial Intelligence (ECAI 2008)*, Patras, Greece, 2008.

S2. S. Konstantopoulos, I. Androutsopoulos, H. Baltzakis, V. Karkaletsis, C. Matheson, A. Tegos and P. Trahanias, “INDIGO: Interaction with Personality and Dialogue Enabled Robots”. System demonstration, *18th European Conference on Artificial Intelligence (ECAI 2008)*, Patras, Greece, 2008.

S1. V. Karkaletsis, G. Samaritakis, G. Petasis, D. Farmakiotou, I. Androutsopoulos, S. Markantonatou and C.D. Spyropoulos, “A Controlled Language Checker Based on the Ellogon Text Engineering Platform”. System demonstration, *2nd Meeting of the North*

American Chapter of the Association for Computational Linguistics (NAACL 2001), Carnegie Mellon University, Pittsburgh, USA, pp. 74–75 (companion volume), 2001.

7. PARTICIPATION IN RESEARCH PROJECTS

“BioQA – Biomedical Question Answering”. AUEB Research Support Programme (2014–15). Project coordinator.

“BioASQ – A Challenge on Large-Scale Biomedical Semantic Indexing and Question Answering”. European FP7 ICT project (2012–14). Principal Investigator of AUEB.

“Natural Language Interaction with Semantic Web ontologies” (2010–13). National Heracleitus-II project. Project coordinator.

“A Linear Programming Approach to Multi-Document Text Summarization and Natural Language Generation from Ontologies” (2011–12). AUEB Basic Research Funding Program (BRFP) project. Project coordinator.

“INDIGO – Interaction with Personality and Dialogue Enabled Robots” (2007–10). European IST project. Principal Investigator of AUEB.

“XENIOS: User-Robot Interaction Based on Visual Perception, Speech Processing, and Natural Language Generation for Use in Robotic Guidance Systems” (2006–07). Project of the Greek “Information Society” programme. Principal Investigator of AUEB.

“Combined Research in the Areas of Information Retrieval, Natural Language Processing, and User Modeling Aiming at the Development of Advanced Search engines for Document Collections” (2006–08). Greek PENED project.

“CROSSMARC: Cross-lingual Multi-Agent Retail Comparison” (2001–03). European IST project.

“M-PIRO: Multi-lingual Personalised Information Objects” (2000–03). European IST project.

“HYGEIOROBOT: Navigation and Control of a Health Service Robot” (2000–01). Greek PENED project.

“FILTERIX: Web Page Filtering System” (2000–04). Internal project of NCSR “Demokritos”.

“MITOS: Information Retrieval and Mining System – Application to Financial News” (1999–2001). Greek EPET project.

“SCHEMATOPOIESIS: Integrated Environment for the Development and Utilization of Sublanguages of Greek” (1999–2001). National EPET project.

“ECRAN: Extraction of Content – Research at Near-Market” (1995–1999). European Language Engineering project.

9. PATENTS

- C.D. Spyropoulos, K. Chandrinos, G. Paliouras, E. Karkaletsis and I. Androutopoulos, “Method for Probabilistic Information Fusion to Filter Multi-Lingual, Semi-Structured and Multimedia Electronic Content”. Patent no. 1005379, Greek Industrial Property Organization, 2006. Submitted to the European Patent Office.

10. OTHER ACTIVITIES AND INFORMATION

- Deputy Head of the Department of Informatics, AUEB (2017–present).
- Director of the Information Processing Laboratory, Department of Informatics, AUEB (2018–present).
- Head of AUEB’s e-Learning Unit (2015–2017).
- Adjunct Researcher of the Digital Curation Unit, Institute for the Management of Information Systems (IMIS), “Athena” Research Centre, Athens, Greece (2007–present).
- Senior Research Advisor of StrainTek (<http://www.straintek.com/about>), a start-up that received funding from Google’s Digital News Initiative (2016–18).
- Citations: 6,260 according to Google Scholar, not excluding self-citations, H-Index: 32, G-Index: 78 (October 2017).
- Reviewer of the journals: *Journal of Artificial Intelligence Research*, *Natural Language Engineering*, *Machine Learning*, *Semantic Web Journal*, *ACM Transactions on Internet Technology*, *ACM Computing Surveys*, *Communications of the ACM*, *IEEE Transactions on Affective Computing*, *Research on Language and Computation*, *Applied Artificial Intelligence*, *International Journal of Artificial Intelligence Tools*, *Artificial Intelligence in Medicine*, *Journal of Biomedical Semantics*, *Computers and Security*, *Universal Access in the Information Society* etc.
- Member of the Program Committee of the following conferences and workshops:
 - *56th Annual Meeting of the Association for Computational Linguistics (ACL 2018)*, Melbourne, Australia, 2018. Chair of Session 8F – Sentiment.
 - *6th BioASQ workshop*, at the *Conference on Empirical Methods in Natural Language Processing (EMNLP 2018)*, Brussels, Belgium, 2018.
 - *2nd Workshop on Abusive Language Online (ALW2)*, at the *Conference on Empirical Methods in Natural Language Processing (EMNLP 2018)*, Brussels, Belgium, 2018.
 - *16th Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT 2018)*, New Orleans, Louisiana, 2018.
 - *10th Hellenic Conference on Artificial Intelligence (SETN 2018)*, Patra, Greece, 2018.
 - *55th Annual Meeting of the Association for Computational Linguistics (ACL 2017)*, Vancouver, Canada, 2017.
 - *15th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2017)*, Valencia, Spain, 2017.
 - *5th BioASQ workshop (part of the BioNLP workshop)*, at the *55th Annual Meeting of the Association for Computational Linguistics (ACL 2017)*, Vancouver, Canada, 2017.
 - *54th Annual Meeting of the Association for Computational Linguistics (ACL 2016)*, Berlin, Germany, 2016.
 - *15th Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT 2016)*, San Diego, CA, USA, 2016. **Best reviewers award** (http://naacl.org/naacl-hlt-2016/best_reviewers.html).

- *4th BioASQ workshop* (part of the *BioNLP workshop*), at the *54th Annual Meeting of the Association for Computational Linguistics (ACL 2016)*, Berlin, Germany, 2016.
- *4th International Workshop on Natural Language Processing for Social Media (SocialNLP 2016)*, at the *25th International Joint Conference on Artificial Intelligence (IJCAI 2016)*, New York, NY and *Empirical Methods in Natural Language Processing (EMNLP 2016)*, Austin, TX, 2016.
- *9th Hellenic Conference on Artificial Intelligence (SETN 2016)*, Thessaloniki, Greece, 2016.
- *Conference and Labs of the Evaluation Forum (CLEF 2015)*, Toulouse, France, 2015.
- *53rd Annual Meeting of the Association for Computational Linguistics and 7th International Joint Conference on Natural Language Processing of the Asian Federation of Natural Language Processing (ACL-IJCNLP 2015)*, Beijing, China, 2015.
- *Language and Ontologies Workshop of the 11th International Conference on Computational Semantics*, London UK, 2015.
- *21st European Conference on Artificial Intelligence (ECAI 2014)*, Prague, Czech Republic, 2014.
- *52nd Annual Meeting of the Association for Computational Linguistics (ACL 2014)*, Baltimore, USA, 2014.
- *14th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2014)*, Gothenburg, Sweden, 2014.
- *Conference and Labs of the Evaluation Forum (CLEF 2014)*, Sheffield, UK, 2014.
- *“Natural Language Interfaces for Web of Data” workshop (NLWoD 2014)*, *13th International Semantic Web Conference (ISWC 2014)*, Riva del Garda, Trentino, Italy, 2014.
- *8th Workshop on Language Technology for Cultural Heritage, Social Sciences, and Humanities (LaTeCH 2014)*, *14th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2014)*, Gothenburg, Sweden, 2014.
- *8th Hellenic Conference on Artificial Intelligence (SETN 2014)*, Ioannina, Greece, 2014.
- *51st Annual Meeting of the Association for Computational Linguistics (ACL 2013)*, Sofia, Bulgaria, 2013.
- *7th Workshop on Language Technology for Cultural Heritage, Social Sciences, and Humanities (LaTeCH 2013)*, *51st Annual Meeting of the Association for Computational Linguistics (ACL 2013)*, Sofia, Bulgaria, 2013.
- *24th International Conference on Computational Linguistics (COLING 2012)*, Mumbai, India, 2012.
- *2012 Conference on Empirical Methods in Natural Language Processing and Natural Language Learning (EMNLP-CoNLL 2012)*, Jesu Island, Korea, 2012. **Best reviewers award** (<http://emnlp-conll2012.unige.ch/best-reviewers.html>).
- *The 2012 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (HLT-NAACL 2012)*, Montreal, Canada, 2012.
- *7th Hellenic Conference on Artificial Intelligence (SETN 2012)*, Lamia, Greece, 2012.

- *25th Conference on Artificial Intelligence (AAAI 2011)*, San Francisco, CA, USA, 2011.
- *European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD 2011)*, Athens, Greece, 2011.
- *49th Annual Meeting of the Association for Computational Linguistics: Human Language Technologies (ACL-HLT 2011)*, Portland, OR, USA, 2011.
- *Joint ECML/PKDD – PASCAL Workshop on Large-Scale Hierarchical Classification (LSHC), European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD)*, Athens, Greece, 2011.
- *Conference on Empirical Methods in Natural Language Processing (EMNLP 2010)*, MIT, MA, USA, 2010. **Best reviewers award** (awarded to 86 out of 460 reviewers).
- *7th Collaboration, Electronic Messaging, Anti-Abuse and Spam Conference (CEAS 2010)*, Redmond, WA, USA, 2010.
- *Workshop on Language Technology for Cultural Heritage, Social Sciences, and Humanities (LaTeCH), 19th European Conference on Artificial Intelligence (ECAI 2010)*, Lisbon, Portugal, 2010.
- *6th Hellenic Conference on Artificial Intelligence (SETN 2010)*, Athens, Greece, 2010. Area chair for “Natural Language Processing”.
- *Large-Scale Hierarchical Classification Workshop, 32nd European Conference on Information Retrieval (ECIR)*, Milton Keynes, UK, 2010.
- *Joint conference of the 47th Annual Meeting of the Association for Computational Linguistics and the 4th International Joint Conference on Natural Language Processing of the Asian Federation of Natural Language Processing (ACL-IJCNLP 2009)*, Singapore, 2009.
- *6th European Semantic Web Conference (ESWC 2009)*, Heraklion, Crete, Greece, 2009.
- *6th Conference on Email and Anti-Spam (CEAS 2009)*, Microsoft Research Silicon Valley, Mountain View, CA, U.S.A., 2009.
- *Workshop on Language Technology and Resources for Cultural Heritage, Social Sciences, Humanities, and Education, 12th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2009)*, Athens, Greece, 2009.
- *5th Conference on Email and Anti-Spam (CEAS 2008)*, Microsoft Research Silicon Valley, Mountain View, CA, U.S.A., 2008.
- *5th European Semantic Web Conference (ESWC 2008)*, Tenerife, Spain, 2008.
- *2nd Workshop on Language Technology for Cultural Heritage Data, 6th International Conference on Language Resources and Evaluation (LREC 2008)*, Marrakech, Morocco, 2008.
- *International Workshop on Computational Aspects of Affectual and Emotional Interaction (CAFFEi), 18th European Conference on Artificial Intelligence (ECAI 2008)*, Patras, Greece, 2008.
- *5th Hellenic Conference on Artificial Intelligence (SETN 2008)*, Syros, Greece, 2008.
- *6th International Semantic Web Conference and 2nd Asian Semantic Web Conference (ISWC 2007 + ASWC 2007)*, Busan, Korea, 2007.

- *4th Conference on Email and Anti-Spam (CEAS 2007)*, Microsoft Research Silicon Valley, Mountain View, CA, U.S.A., 2007.
- *Workshop on Language Technology for Cultural Heritage Data, 45th Annual Meeting of the Association for Computational Linguistics (ACL 2007)*, Prague, Czech Republic, 2007.
- *3rd Conference on Email and Anti-Spam (CEAS 2006)*, Microsoft Research Silicon Valley, Mountain View, CA, U.S.A., 2006 (Program Committee co-chair).
- *3rd International Semantic Web User Interaction Workshop, 5th International Semantic Web Conference (ISWC 2006)*, Athens, GA, U.S.A., 2006.
- *4th Hellenic Conference on Artificial Intelligence (SETN 2006)*, Herakleion, Crete, Greece, 2006.
- *2nd Conference on Email and Anti-Spam (CEAS 2005)*, Stanford University, CA, U.S.A., 2005.
- *3rd International Conference on Natural Language Generation (INLG 2004)*, Brockenhurst, New Forest, U.K., 2004.
- *26th European Conference on Information Retrieval Research (ECIR 2004)*, University of Sunderland, U.K., 2004.
- *3rd Hellenic Conference on Artificial Intelligence (SETN 2004)*, Samos, Greece, 2004.
- *25th European Conference on Information Retrieval Research (ECIR 2003)*, Pisa, Italy, 2003.
- *Workshop on Balkan Language Resources and Tools, 1st Balkan Conference in Informatics*, Thessaloniki, Greece, 2003.
- *2nd Workshop on Operational Text Classification Systems (OTC 2002)*, Tampere, Finland, 2002.
- *2nd Hellenic Conference on Artificial Intelligence (SETN 2002)*, Thessaloniki, Greece, 2002.
- *Panhellenic Conference with International Participation on Human-Computer Interaction (PC-HCI 2001)*, Patra, Greece, 2001.
- *Student Session of the 36th Annual Meeting of the Association for Computational Linguistics and 17th International Conference on Computational Linguistics (COLING-ACL 1998)*, Montreal, Canada, 1998.
- Member of the Scientific Committee of the following conferences:
 - *9th Conference on Language Resources and Evaluation (LREC 2014)*, Reykjavik, Iceland, 2014.
 - *8th Conference on Language Resources and Evaluation (LREC 2010)*, Malta, 2010.
 - *7th Conference on Language Resources and Evaluation (LREC 2009)*, Malta, 2009.
 - *6th Conference on Language Resources and Evaluation (LREC 2008)*, Marrakech, Morocco, 2008.
- Member of the Organizing Committee of the following conferences, workshops, and competitions:
 - *SemEval-2016 Task 5: Aspect Based Sentiment Analysis*.
 - *SemEval-2015 Task 12: Aspect Based Sentiment Analysis*.

- *SemEval-2014 Task 4: Aspect Based Sentiment Analysis*.
- *Joint ECML/PKDD – PASCAL Workshop on Large-Scale Hierarchical Classification (LSHC), European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD)*, Athens, Greece, 2011.
- *12th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2009)*, Athens, Greece, 2009.
- *Workshop on End User Semantic Web Interaction, 4th International Semantic Web Conference (ISWC 2005)*, Galway, Ireland, 2005 (co-chair of the Organizing Committee).
- *12th International Symposium on Languages for Intensional Programming (ISLIP 1999)*, Athens, Greece, 1999.
- Reviewer of other conferences and programmes:
 - 23rd International Conference on Advanced Information Systems Engineering (CAiSE 2011), London, UK, 2011.
 - *11th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2006)*, Trento, Italy, 2006.
 - *Information Society Programme (FP6, SO 2.4.7, “Semantic Based Knowledge and Content Systems”)*, European Commission, Brussels, Belgium, 2005.
 - *12th European Conference on Machine Learning (ECML 2001) and the 5th European Conference on Principles and Practice of Knowledge Discovery in Databases (PKDD 2001)*, Freiburg, Germany, 2001.
 - *8th Panhellenic Conference in Informatics (EPY 2001)*, Nicosia, Cyprus, 2001.
 - *14th European Conference on Artificial Intelligence (ECAI 2000)*, Berlin, Germany, 2000.
 - *Joint European Conference on Artificial Intelligence in Medicine and Medical Decision Making (AIMDM 1999)*, Aalborg, Denmark, 1999.
 - *7th Panhellenic Conference in Informatics (EPY 1999)*, Ioannina, Greece, 1999.
- Special Secretary of the Hellenic Artificial Intelligence Society (EETN, December 2006 – December 2010).