

CV of Professor JOHN KONTOS

Degrees

B. Sc. with Honours in Electrical Engineering, Strathclyde University, Glasgow, Scotland.

M. Sc. in Computer Science, Electrical Engineering Department, University of Birmingham, Birmingham, England.

Ph. D. in Computer Science, Electrical Engineering Department, University of Birmingham, Birmingham, England.

PostDoc Diploma of the National Technical University of Athens

Positions

1965-1988 Director of the Computer Science Department of the Research Centre “Demokritos”

1988-2000 President of the Hellenic Artificial Intelligence Society

1988-2000 Professor of Artificial Intelligence at the University of Economics of Athens

2000-2005 Professor of Artificial Intelligence at the University of Athens

2005-now Emeritus Professor of Artificial Intelligence at the University of Athens.

2020-now Member of the Elsevier advisory panel.

Awards and Distinctions

2010: Lifetime Achievement Award for Alumni by Strathclyde University, Glasgow, Scotland in recognition of his outstanding career in the field of Computer Science.

2021: Invited as Speaker of Eminence by the ICFAI University at Jaipur, India on Artificial Intelligence and Learning.

2023. Academic Excellence Award in Artificial Intelligence by the British Computer Society.

2024. Invited as Keynote Speaker at the International Conference on Data Analytics and Artificial Intelligence, India.

Funded Research Project Leadership

1. 1970-1990 Natural Language Question Answering
2. 1988-1989 Director of the Greek EUROTRA project of the E.U.
3. 1992-1994 Project Leader of STRIDE/HOLIST project of the G.S.R.T. (Greek Organization of Research and Technology that manages all public grant money for Science and Technology)
4. 1992-1994 Leader of the Knowledge Extraction from Scientific Texts Group of STRIDE/HOLIST project of the G.S.R.T.
5. 1999-2000 Project Leader of DEIKTIS project of ΕΠΕΤII of the G.S.R.T.
6. 1999-2000 Project Leader of the AUEB part of MITOS project of the G.S.R.T.

7. 1999-2000 Deputy Project Leader of ELEFSI project of ΕΠΕΤII of the G.S.R.T.
8. 2003-2006 Project Leader of the ADAM project of ΕΠΑΝ of the G.S.R.T.
9. 2003-2006 Project Leader of the PLASMA project of ΕΠΑΝ of the G.S.R.T.
10. 1992-2021 Explainable Question Answering

PUBLICATIONS

1. Kontos, J. (1960). "An Electronic Rotor". Bachelor of Science Thesis, Dept. of Electrical and Electronic Engineering, University of Strathclyde, Glasgow, Scotland.
2. Kontos, J. and J. C. Cluley (1962). "An Analogue Study of the Human Respiratory System". Memo No. 109, Electrical Engineering Department, University of Birmingham.
3. Kontos, J. (1963a). "Simulation Studies in Respiratory Mechanics". Ph. D Thesis (Part A). Department of Electrical and Electronic Engineering, University of Birmingham.
4. Kontos, J. (1963b). "Simulation Studies in Magnetohydrodynamics". Ph. D Thesis (Part B). Department of Electrical and Electronic Engineering, University of Birmingham.
5. Kontos, J. (1963c). "Introduction to Computer Technology" (in Greek). Hellenic Ministry of Coordination Teaching Book.
6. Kontos, J. (1964). "A Pulse Modulator". Proceedings of the IEEE. Vol. 52.
7. Kontos, J. (1965a). "Analysis of a Pulse Modulator". Electronic Engineering. Vol. 37.
8. Kontos J. (1965b). "Analogue computation of instability growth rates in finite conductivity magnetohydrodynamics". Nuclear Fusion 5 162.
9. Kontos, J. (1966a) "A Pattern Generator. Nuclear Instruments and Methods", Vol. 40, February.
10. Kontos, J. et al (1966b), "A Control Engineering Approach to Magnetohydrodynamic Stability". Proceedings of the I.E.E., Vol 113, No 3.
11. Kontos, J. and G. Philokyrou (1966c), "Detection of Pseudorandom Binary Sequence Cycle Completion". Electronic Engineering, November.
12. Kontos, J. et al (1966d), "Possibilities of Power Reactor Installation in Greece". Hellenic Atomic Energy Commission Report.
13. Kontos, J (1967a). "Analog-digital Computer with Pulse Ratio Modulation". D.Sc. Thesis. National Technical University Of Athens.
14. Kontos J. and G. Philokyrou (1967b), "On Pattern Generation". 2nd International Symposium on Information Theory, San Remo, Italy.
15. Kontos, J. (1967c). "Neuroid Studies". Proceedings of 4th International Congress of Cybernetics, Namur, Belgium. October 1964. Proceedings, Namur.

16. Kontos, J. (1968a). "A Track-following Computer System". Nuclear Instruments and Methods, Vol. 60, April.
17. Kontos, J. (1968b). On the on-line computation of reactivity. Nuclear Instruments and Methods, Vol 65.
18. Kontos, J. (1968c). "Hybrid computing Units using a Pulse Ratio Modulator". Annales of AICA, July.
19. Kontos, J and G. Philokyprou (1968d). "Generating Classes of Binary Patterns". I.E.E.E. Transactions on Information Theory, Vol. 14, July.
20. Kontos, J. and A. Kossidas (1969). "Digital Computer Proteus". Hellenic Atomic Energy Commission , 209/33/95 Rpt.
21. Kontos, J. and S. Tzafestas (1970). "On the Transient Performance of a Class of Limit Cycling Control Systems". I.E.E.E. Transactions on Automatic Control, Vol. AC-15, June.
22. Kontos, J. and G. Papakonstantinou, (1970a). "On-line Event Following with Computer". Nuclear Instruments and Methods, February.
23. Kontos, J. and G. Papakonstantinou, (1970b). "A Question-Answering System Using Program Generation". Proceedings of A.C.M. International Computing Symposium, Bonn Germany.
24. Kontos, J. (1971). "An Iterative Computer Using Pulse-ratio Modulation". I.E.E.E. Transactions on Computers, Vol. C-20, October.
25. Kontos, J. and G. Papakonstantinou, (1971), "A Simulation Method for Computer Control Systems". I.E.E.E. Transactions on Computers, January.
26. Kontos, J. and A. Kossidas, (1971). "On the Question Answering System DELFI and its Application". Proceedings of AGARD Symposium on Artificial Intelligence. Rome, Italy.
27. Kontos, J and G. Papakonstantinou (1971). "Human Language Problem Solving System". Technika Chronika, October.
28. Kontos, J. (1972). "Program Generators Controlled by Natural Language", CALCOLO, IX.
29. Kontos J., et al (1972). "Relative position of the rib within the chest and its determination on living subjects with the aid of a computer program". Respiration Physiology, 16.
30. Kontos, J. and Papakonstantinou, G. (1972). "Semantic Interpretation of English-like questions using procedural components". Proceedings of the Symposium on On-line mechanical information retrieval systems, Lyngby, Denmark.
31. Kontos, J. (1972). "R and D. on Computers in Greece". 1st International Conference Greek Scientists in Abroad.
32. Kontos, J. and G. Papakonstantinou, (1974). "A Query-oriented File Organization Technique". International Journal of System Sciences, Vol. 5, No. 8.
33. Kontos, J. et. al. (1974). "Determination of equivalent non-elastic lung resistance. Νοσοκομειακά Χρονικά, 36, 357.
34. Kontos, J. et. al. (1976). "Mean non-elastic lung resistance and its equivalents (effective resistance)". Pneumonologie 153, 153, 209.

35. Kontos, J. et. al. (1977a). "Effective and equivalent total resistance of compliance of the lungs". Νοσοκομειακά Χρονικά, 39,
36. Kontos, J. et al (1977b) "General description and evaluation of the Democritus flying-spot digitizing computer system" Technical Report of the Greek Atomic Energy Commission, Nuclear Research Center "Democritus," , 42 pages.
37. Kontos, J. et al (1979). "Effective time of the forced expiratory spiogram in health and airways obstruction" Thorax, 34, 2
38. Kontos, J. (1980a). "Syntax-Directed Processing of Texts with Action Semantics". Cybernetica, 23, 2, 157-175.
39. Kontos, J. (1980b). "Non-procedural Specification of Information Systems". Proceedings of the 1st Working Conference on Oceanography Related to Environmental Problems. Aegina, Greece.
40. Kontos, J. (1981). "Formalization of the Algorithm Design for a Pattern Matching System". International Journal of Electronics, Vol. 50, No 6.
41. Kontos, J. (1982). "Syntax-Directed Plan Recognition with a Microcomputer". Microprocessing and Microprogramming. 9, pp. 227-279.
42. Kontos, J. and Papakonstantinou, G. (1982). "The Interpretation of Meta Grammars describing in Syntax-Directed Interpreters using an Attribute Grammar Interpreter". IEEE Trans. Software Eng., Vol. SE-8 (4), 435-436.
43. Kontos, J. (1983a). "Syntax-Directed Fact Retrieval from Texts with a Micro-Computer". Proceedings of MELECON '83, Athens.
44. Kontos, J. (1983b). "Text Retrieval for User Interfacing with the Micro-Computer". Proceedings of MECO '83, Athens.
45. Kontos, J. (1983c). "Informatics of Narrative Texts". Proceedings of the 2nd Panhellenic Conference of Semiotics, Athens.
46. Kontos, J. (1984a). "Medical Expert Systems". Proceedings of 1st Panhellenic Symposium of Applications of Electronic Computers in Medicine. Athens (Invited Paper).
47. Kontos, J. (1984b). "Natural Language Processing Research in Demokritos". Proceedings of the 1st Panhellenic Conference of Informatics, Athens.
48. Kontos, J. (1985). "Natural Language Processing of Scientific/Technical Data, Knowledge and Text Bases". (Invited paper) Proceedings of the EEC ARTINT Workshop. Luxemburg.
49. Kontos, J. and Papakontantinou, G. (1986a). "Knowledge Representation with Attribute Grammars. The Computer Journal. Vol. 29, No 3, pp. 241-245.
50. Kontos, J. (1986b). "Informatics and Linguistics". Diavazo, No 144, May.
51. Kontos, J. (1986c). "Informatics of Narrative Texts". Dynamics of Signs, Paratiritis, Thessaloniki.
52. Kontos, J. and G. Spyropoulos (1987). "Artificial Intelligence in the Fault Diagnostics of Electronic Systems". Proceedings of the 1st National Symposium on Automation and Robotics, Athens.

53. Kontos, J. (1988a). "Knowledge Acquisition from Technical Texts Using Attribute Grammars". The Computer Journal, Vol 31, No 6, pp 525-530.
54. Kontos, J. and Xinos, P. (1988b). "A Method for Handling Incompleteness of Knowledge Acquired from Texts Using Partial Attribute Grammar Evaluation". Proc. IASTED Int. Conf. on Expert Systems, Geneva.
55. Kontos, J. and Spyropoulos, K. (1988c). "Automatic Organization Diagnosis Based on Behavioral Modeling with Grammars". Advances in Modeling and Simulation Vol 13, No 3, pp. 51-63.
56. Kontos, J. (1988d). "Information and Knowledge Extraction from Medical Texts". Workshop on "Information Retrieval and Information Extraction". Athens.
57. Kontos, J. (1988e). "Question Answering for Information and Knowledge Extraction". Workshop on "Information Retrieval and Information Extraction". Athens.
58. Kontos, J. et al. (1989). "Computational Processing of Greek". 9th Annual Meeting Department of Linguistics 18-20 April University of Thessaloniki.
59. Kontos, J. (1990). "Natural Language Processing of text is not what it claims to be". Information and Software Technology, Vol. 32, No 4. (Invited Review).
60. Kontos, J. (1991). "On the Acquisition of Causal Knowledge from Scientific Texts with Attribute Grammars." Expert Systems & Information Management. Vol. 4, No 1, pp 31-48.
61. Kontos, J. (1992a). "ARISTA: Knowledge Engineering with Scientific Texts". Information and Software Technology, Vol. 34, No 9, pp 611-616.
62. Kontos, J. (1992b). "Artificial Intelligence and International Peace". Studies in honour of Professor A. Kanellopoulos University of Piraeus Book.
63. Kontos, J. (1992c). "Automatic Representation Independent Syllogistic Text Analysis (ARISTA)". Proceedings HERMIS 92, Athens.
64. Kontos, J. et al (1994). "Final Report of the HOLIST Project". Center of Research, Athens University of Economics.
65. Kontos, J. et al. (1995). "Natural Language Processing in Carcinoma Diagnosis". Internal Report, Department of Informatics. Athens University of Economics.
66. Kontos, J. (1996a). "Artificial Intelligence". University Textbook in Greek. Editions Benou.
67. Kontos, J. (1996b). "Natural Language Processing in the Athens University of Economics and Business" Proceedings of the 1st Symposium of the Hellenic Association of Artificial Intelligence. University of Piraeus.
68. Kontos, J. and I. Malagardi (1996c). "Computer Processing of Concepts of the Gortys Inscription for the Automatic Extraction of Knowledge". 8th International Cretological Conference, Herakleion, Crete.

69. Kontos, J. and I. Malagardi (1996d). "Natural Language Processing of Ancient Legal Text from the Gortys Inscription". 1st Symposium of the Hellenic Association of Artificial Intelligence. University of Piraeus.
70. Kontos J., Pegou M. (1996e) "Natural Language Motion Instruction Interpretation". INFORMS, San Diego, Ca, USA.
71. Kontos J. et al (1997a). "Computer Processing of Verb Definitions ". Third International Linguistics Conference for the Greek language, Athens.
72. Kontos, J. and Malagardi I. (1997b). "Question Answering from Data Bases and Text Bases". Third International Linguistics Conference for the Greek language, Athens.
73. Kontos, J. (1997c) "Interface Systems and Knowledge Processing from Texts" Logoploigisi No 2.
74. Kontos, J. (1997d) "Language Engineering and Intelligent Agents". Logoploigisi No 3.
75. Kontos, J., et al(1998a). Natural Language Interface to an Agent. EURISCON '98 Third European Robotics, Intelligent Systems & Control Conference Athens. Published in Conference Proceedings "Advances in Intelligent Systems: Concepts, Tools and Applications" (Kluwer).
76. Kontos, J. and I. Malagardi (1998b). Question Answering and Information Extraction from Texts. EURISCON '98 Third European Robotics, Intelligent Systems & Control Conference. Athens. Proceedings in "Advances in Intelligent Systems: Concepts, Tools and Applications" (Kluwer). ch. 11, pp. 121-130.
77. Kontos, J. and I. Malagardi (1998c). Information and Knowledge Extraction from Medical Texts. Health Telematics Education Conference. Athens.
78. Kontos, J. (1998d), Logomechanics, Induction and Creation. Proceedings of Art and Technology Conference. Athens.
79. Kontos, J. and Malagardi, I. (1998e). Information and Knowledge Extraction from Medical Texts. Logoploigisi No 5.
80. Kontos, J. and I. Malagardi (1999a). Information Extraction and Knowledge Acquisition from Texts using Bilingual Question-Answering. Journal of Intelligent and Robotic Systems. Kluwer Academic Publishers.
81. Kontos, J. and I. Malagardi (1999b). A Learning Natural Language Interface to an Agent. Proceedings of Workshops of Machine Learning, ACCAI 99, Chania.
82. Kontos, J., et al (2000a) ARISTA Generative Lexicon for Compound Greek Medical Terms. LREC 2000, Vol. II.
83. Kontos, J., et al (2000b) Greek Verb Semantic Processing for Stock Market Text Mining. NLP 2000 Lecture Notes in Artificial Intelligence NLP 2000 pp. 395-405 Springer Verlag.
84. Kontos, J., et al (2000c) A Greek Lexical System for Medical Texts. Workshop Computational Terminology for Medical and Biological Applications, Patras.
85. Kontos, J., et al (2000d) Semantics of Technical Lexicons, COMLEX 2000, Workshop on Computational Lexicography, Patras.

86. Kontos, J. and I. Malagardi (2001a). A Search Algorithm for Knowledge Acquisition from Texts HERCMA 2001, Athens.
87. Kontos, J. and Malagardi, I. (2001b). Information Extraction from Ancient Hellenic Texts using Automatic Knowledge Acquisition from Lexical Definitions. Journal of Neural, Parallel and Scientific Computations.
88. Kontos, J. and Bouligaraki M. (2001c). "Development of a Lexical Data Base and Syntax Analyzer for Controlled Greek". Proceedings of the Workshop "Lexical Data bases", Thessaloniki.
89. Kontos, J et al (2001d). "A multimedia educational system to teach epidemiology". HERCMA 2001, Athens, 259-267.
90. Kontos, J. et al (2001e). "Automatic detection of verb-groups for information extraction from Greek technical texts". HERCMA 2001, Athens, 235-239.
91. Kontos, J. et al (2001f). "Rule extraction from decision trees with complex nominal data". Neural, Parallel and Scientific Computations, June.
92. Kontos, J. et al, (2002a). "System Modeling by Computer using Biomedical Texts". Proceedings of the 5th European Systems Congress, Heraklion, Crete, Res Systemica 2, October.
93. Kontos, J. et al, (2002b). "A Virtual Robotic Agent that Learns Natural Language Commands". Proceedings of the 5th European Systems Congress, Heraklion, Crete, Res Systemica 2, October.
94. Kontos, J. et al, (2002c). "ARISTA Causal Knowledge Discovery from Texts". Discovery Science 2002, Luebeck, Germany, November.
95. Kontos, J. et al, (2003a). "The Simulation Subsystem of the AROMA System". HERCMA 2003, Athens.
96. Kontos, J. and I. Malagardi, (2003b). "Computational Linguistics" Proceedings of HERCMA 2003, Athens.
97. Kontos, J. (2004). Chapter "Artificial Intelligence" in the collective volume "Cognitive Science. The New Science of Mind". Gutenberg Editions.
98. Kontos, J. et al (2005). "Question Answering and Rhetoric Analysis of Biomedical Texts in the AROMA System". HERCMA 2005, Athens.
99. Kontos, J. and I. Malagardi (2006) "Question Answering from Procedural Semantics to Model Discovery" Encyclopedia of Human Computer Interaction 479-485.
100. Kontos, J. and I. Malagardi, (2007a) "Text Generation for the Description of Action Sequences". HERCMA 2007, Athens.
101. Kontos, J. and I. Malagardi, (2007b) "Motion Verbs and Vision" HERCMA 2007, Athens.
102. Kontos, J., et al, (2007c) "Computational Discovery of Ontology and Axioms for Geometry". HERCMA 2007, Athens.
103. Kontos, J., et al. (2007d), "Thesaurus Integration In Question Answering" Proceedings of the 3rd Balkan Conference in Informatics (BCI'2007), September, Sofia, Bulgaria.
104. Kontos J. and Armaos J. (2007e), "Metacognitive Question Answering from Euclid's Elements Text". HERCMA 2007, Athens.

105. Kontos, J. and I. Malagardi(2007f) "Question Answering from Procedural Semantics to Model Discovery" Intelligent Information Technologies: Concepts, Methodologies, Tools, and Applications Information Science Publishing.
106. Kontos, J, et al, (2009) "Metagnostic Question Answering from Biomedical Texts", HCI2009, San Diego, USA, July 19-24.
107. Kontos J. et al, (2011), "Metagnostic Deductive Question Answering with Explanation from Texts", Universal Access in HCI, Part IV, HCI 2011, , pp. 72–80, Springer-Verlag Berlin Heidelberg.
108. Kontos J. et al, (2012). "Information Extraction from Historic Texts". Proceedings of the Annual Meeting of the Department of Linguistics, School of Philology, Aristotelian University of Thessaloniki.
109. Kontos J. and Kasda P. (2013). Text Mining and Image Anomaly Explanation with Machine Consciousness. Advances in Computer Science, Vol. 2, Issue 5, No.6 , November.
110. Kontos J. (2014) POETRY:"Gyneologia" . Poetry Collection. Published by Notios Anemos, Athens, Greece.
111. Kontos J. and Kasda P. (2015). BOOK:"Artificial Intelligence Professor John Kontos needles Poly Kasda's Conscious Eye". Book (pp 297). Published by Notios Anemos, Athens, Greece.
112. Kontos J. (2016a). POETRY: "Elleimmatiko Chronologio". Poetry Collection. Published by Notios Anemos, Athens, Greece.
113. Kontos J. (2016b). POETRY: "Anadromes kai Dromoi Neoi". Poetry Collection. Published by Notios Anemos, Athens, Greece.
114. Kontos J. , (2016c). "Machine Consciousness and Question Answering". American Journal of Data Mining and Knowledge Discovery, 1(1): 7-15.
115. Kontos J , (2016d). "Artificial Intelligence and Greek Applications". Published by Notios Anemos, Athens, Greece.
116. Kontos J. (2017). "Self-aware computing". Fourth Software for Domain Experts Conference at The Cube, Athens, May 2.
117. Kontos J. (2018). "Machine Learning Methods and String Matching", 6th Global Summit on Artificial Intelligence and Neural Networks, October 15-16, 2018 Helsinki, Finland. Theme: Harnessing the power of Artificial Intelligence.
118. Kontos J. (2021a). "Human-system interface with explanation of actions for autonomous anti-uav systems". International Journal of Artificial Intelligence & Applications (IJAIA), Vol.12, No.4, July, DOI: 10.5121/ijaia.2021.12404 51.
119. Kontos J. (2021b). "Artificial Intelligence, Machine, Consciousness and Explanation". *Academia Letters*, Article 1709.
120. Kontos J. (2021c) "Artificial or Computational Creativity and its Definition". Systemic Design Thinking for Creativity. 11th EUS International Congress. Athens, Greece.
121. Kontos J. (2022). "An introduction to the subject of Machine or Artificial Consciousness and summary of work on the subject by the group of the speaker". Pythagoras Samos International Festival 2022.

122. Economou A. and John Kontos (2023a). "Testamentary capacity assessment in dementia using artificial intelligence: prospects and challenges". Front. Psychiatry, 31 May, Sec Forensic Psychiatry, Volume 14.
123. Kontos J (2023b). "Analysis Dialogs and Machine Consciousness". Book Chapter in "Chatbots - The AI-Driven Front-Line Services for Customers", edited by Eduard Babulak.