

Curriculum vitae

Prof. Stefan Trausan-Matu, PhD

Contact

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Education

- 2005 – Fulbright PostDoc, Drexel University, Philadelphia, PA, USA
- 1994 - Ph.D. in Computer Science, from the "Politehnica" University of Bucharest, Romania, with a thesis on Knowledge-Based Reverse Engineering of Programs.
- 1983 - Engineer in Computer Science, “Politehnica” University of Bucharest, with a dissertation on Expert Systems for Design
- 1977 – Informatics (Tudor Vianu) High School, Bucharest
- 1972 –Elementary Music School (cello)

Positions

2001 - present	Full professor (assoc. prof. 1997-2001, lecturer 1994-1997)	"Politehnica" University of Bucharest, Computer Science Department
1999 - present	Scientific researcher 1 st grade (part time)	Romanian Academy Institute for Artificial Intelligence
2015	Invited Professor	Universite Grenoble Alpes, Grenoble, France
2009	Invited Professor	Universite Paul Sabatier, Toulouse, France
2008	Invited Professor	Universite Lyon 2, France
2005	Invited Professor as a Fulbright Scholar	Drexel University, Philadelphia, PA, USA
2003, 2007	Invited Professor	Ecole Polytechnique de l'Universite de Nantes, France
1999 – 2002	Deputy Director	Romanian Academy Institute for Artificial Intelligence
1994 –1999	Senior researcher 2 nd grade, Head of the Conceptual Modeling Group	Romanian Academy Institute for Artificial Intelligence (RACAI).
1993 –1994	Head of Artificial Intelligence Laboratory	Research Institute for Informatics, Bucharest.
1990 –1993	Senior researcher 3 rd grade	Research Institute for Informatics, Bucharest.
1987 –1990	Researcher	Research Institute for Informatics, Bucharest.
1985 – 1987	Applications programmer	Research Institute for Informatics, Bucharest.
1983 – 1985	Applications programmer	"Microelectronica" Bucharest

Taught courses

1994 – now: Human-Computer Interaction
1995 – now: Natural Language Processing (master level, in English)
1999 – now: Analysis of Algorithms
2007 – now: Algorithm Design

2009 – now: Collaborative and Adaptive Systems (master level)
2010 – 2017: Advanced Semantic Web (master level, in English)
2012-2014: Conception de corpus (master level, in French)
2012-2013: Algo-programmation (master level, in French)
2006-2010: Knowledge Management (master level)
2006-2008: Knowledge extraction in web conversational systems (master in collaboration with the Universities of Lyon and Nantes, France)
2002-2008: Text Mining (master level, in collaboration with the Universities of Lyon and Nantes, France, in French)
2002-2005: Cognitive Systems (master level - at the Philosophy Department of Politehnica Univ.)
2004: Knowledge-Based Systems
2002: Introduction to Artificial Intelligence
1997-1999: Artificial Intelligence (master level, at the University “Ovidius” of Constanta)
2001: Functional Programming
1992-1993, 2001: Expert Systems
1996–1999: Information systems design
1994–2006: Advanced Programming Languages (Lisp, ML, Scheme)
1992–1998: Data Structures and Algorithm Analysis

Research interests and accomplishments

The research interests are at the confluence of Social Web, Artificial Intelligence, Natural Language Processing, Discourse Analysis, Knowledge Construction, Education, Philosophy, and Music. I introduced the Polyphonic Model and Analysis Methodology for collaboration, learning and creativity, based on the idea that these activities have essential common points with the polyphonic music. Starting from it a series of environments were developed, including PolyCAFe and ReaderBench. This polyphonic model achieved the *Romanian Academy Award* (for 2013, awarded in 2015).

The research results were presented in highly rated journals, including Q1 rated on WOS (International Journal on Computer Supported Collaborative Learning - Springer, Computers in Human Behaviour – Elsevier, Computers in Human Behavior, etc.) and conferences (including many A rated and ISI proceedings) in USA, UK, Germany, France, Netherlands, Italy, China, Hong Kong, Spain, Belgium, Poland, Hungary, Slovakia, Suisse, Bulgaria, and Canada).

The research domains in the last 5 years were:

- Artificial Intelligence, Semantic Web, Ontologies, Knowledge-based systems
- Natural language processing
- Computer-Supported Collaborative Learning
- Social Software
- E-Learning
- Music and computers
- Human-computer interaction
- Philosophy, psychology, religion-science relation

Won by competition and/or director for the Romanian part in European Union funded research projects FP6, FP7, EUREKA, H2020, ERASMUS+ (PEKADS, LarFLaST, IKF, Inf3S, SkyNurse, LTfLL, RAGE, ENeA, etc.), participated in others (NSF-VMT, PAIL, BalkaNet, Poirot, EU-NCIT, COOPER, ERRIC, TOWNTOLGY, MUMIA, Republic of Letters, TextLink, etc.) and coordinated many national ones.

Development of software systems, results of research activities:

- **ReaderBench** – Multi-purpose environment for textual data <http://readerbench.com/>
- **PolyCAFe** – Environment for the Natural Language Processing of collaborative problem solving chats - <http://www.ltfll-project.org/index.php/polycafe.html>

- **Polyphony** – Environment for collaborative problem solving chats
- **SINTEC** – Intelligent Tutoring System based on ontologies and XML annotations standards for learning objects
- **STyLe** – System for assisting the learning of a foreign language in a technical domain
- **PEKADS** – Operationalization of the KADS knowledge acquisition methodology using description logics
- **PAIL** – Portable Artificial Intelligence Lab. (partial participation)
- Intelligent reverse engineering system
- **COPE** - A flexible constraint processing module for object-oriented programming
- **XRL** – Environment for developing knowledge-based systems
- **VECTORI, PROMPT** – programs for Computer Aided Design of Integrated Circuits Layouts

Community work

- Member of Consiliul Național de Atestare a Titlurilor, Diplomelor și Certificatelor Universitare (CNATDCU)
- Vice-chair of ACM-SIGCHI, Romania
- Member of the Romanian Committee for the History and Philosophy of Science of the Romanian Academy (CRIFST)
- Member of the Committee for the Romanian Language Processing with Computers
- Program Chair of Intelligent Tutoring Systems Conference (A+ ranking), Honolulu, Hawaii, US (2014)
- Chairman of the Second International K-Teams Workshop, Lille, France (2013)
- Program Chair of the Romanian Conference on CHI, Bucharest, Romania (2011)
- Chairman of the First International K-Teams Workshop, Bucharest (2011)
- Chairman of Program Committee of the Eighth Romanian Conference on Human-Computer Interaction (2011)
- General Co-Chair of the 3-rd International Conference on IEEE Emerging Intelligent Data and Web Technologies, Bucharest (2012)
- President of the First Romanian Conference on Human-Computer Interaction (2004)
- Member of the Organization Committee of conferences, workshops and summer schools:
 - * 2007, 2008, 2011, 2013-2019 – K-Teams Workshops on Collaborative Knowledge Construction in Virtual Teams (first three and last two in Bucharest, Romania and fourth in Lille France)
 - * 2011 – Romanian Conference on CHI, Bucharest, Romania
 - * 2010 – Second Workshop on Natural Language Processing in Support of Learning, Bucharest, Romania
 - * 2009 - First Workshop on Natural Language Processing in Support of Learning, Brighton, UK
 - * 2004 – President of the First Romanian Conference on CHI, Bucharest, Romania
 - * 2002 - Task Models and Diagrams, Bucharest, Romania
 - * 2000 - Virtual Environments Workshop, Bucharest, Romania
 - * 1994 - Summer School on Artificial Intelligence and Portable AI Lab., Bucharest, Romania
- * Reviewer at highly rated ISI journals: International Journal on Computer Supported Collaborative Learning (Springer), Information Sciences Journal (Elsevier), Computers in Human Behaviour (Elsevier), Journal of Biomedical Information (Elsevier), Computers & Education (Elsevier); IEEE Transactions on Systems, Man and Cybernetics: Systems; IEEE Transactions on Power Delivery
- * Committee program member at international conferences (CSCL 2011, 2013; 2015; 2017; 2019, FLAIRS 2003 Special Track on Natural Language Applications, EGC 2005-2016; WBE 2007; ITS 2014, 2016; 2018; 2020, WITREC 2000, AIMSA-2000, 2016; 2018; 2020, TAMODIA-2002, 2004, etc.)
- * Reviewer at conferences (IJCAI 2013; CSCL 2011, 2013; 2015; 2017; 2019, CHI 2003-2009; ECTEL 2009-2020, ICLS 2006, 2012, 2014, 2016; 2018, WBE 2007-2009, FLAIRS 2003, HCI-International 2003, ITS 2002-2020, WITREC 2000, SCI-2003, 2002, 2001, ICALT-2001, 2007, 2010-2019, etc.)
- * Member in the Senate of the University Politehnica of Bucharest
- * Member in the Scientific Council of the Romanian Academy Research Institute for Artificial Intelligence
- * Member in the Faculty Council
- * Member in PhD, master dissertation and diploma committees
- * Member in the ACM programming contest staff
- * Reviewer for research grants NSF (USA), FP6 (EU), national grants

Graduated PhD students (21)

Claudiu Mușat, Costin Chiru, Ștefan Dumitrescu, Vlad Posea, Ana Găinaru, Traian Rebedea, Mihai Dascălu, Clementin Cercel, Abdel Alnasser Alasfour, Raghad Jawad Ahmed Al-Shama'a, Raghad Jawad Ahmed Al-Shama'a, Mihaela Balint, Larise Stavarache, Sibel Denisleam, Mohammad Allaymoun, Alina-Eugenia Lascu Negulescu, Liviu Sebastian Matei, Marius Gabriel Guțu, Ionuț Cristian Paraschiv, Munef Abdullah Ahmed, Stefan Ruseți, Octavian Rinciog

Postdoc adviser

Mihai Dascalu, Traian Rebedea, Costin Chiru, Dumitru-Clementin Cercel

Master students

More than 70 master students were advised for their thesis: Răzvan Bunescu, Mihai Stroe, Claudiu Mușat, Cristina Scheau, Ana Găinaru, Traian Rebedea, Mihai Dascălu, Costin Chiru, Vlad Posea, Dan MIhăilă, etc.

Graduate and Undergraduate Students Mentored

More than 200 undergraduate students were advised for their thesis

Other data

- * Romanian Academy Award “Mihai Draganescu” (for 2013, awarded in 2015) for the Polyphonic Model
- * Fulbright Scholar Post-doc, Drexel University, Philadelphia, Pennsylvania, US (2005)
- * Full member of the Academy of Romanian Scientists
- * Member of CNATDCU (Consiliul Național de Atestare a Titlurilor, Diplomelor si Certificatelor Universitare)
- * Tutorials at international conferences (Biarritz 2002, San Marino 2001, Montpellier 2000)
- * Invited professor, Philadelphia, USA (2004, 2005); Nantes (2003, 2005), Grenoble (2015), Toulouse (2009), Lyon (2008), Montpellier (2000), France
- * Keynote speaker at the Intelligent Tutoring Systems Conference, Zagreb (2016)
- * Research stages in Bratislava, Slovakia (1988-89 and 1990), UK (1995), and Netherlands (1994, 1996)
- * Winner of the first prize at the first National Computer Programming Contest, Brasov, Romania (1976)

Associations

- * Member of the Association for Computing Machinery (ACM)
- * Member of the International Society for Learning Sciences (ISLS)
- * Member of the Romanian ACM SIGCHI
- * Founder Member of the Romanian Association for Artificial Intelligence (ARIA)
- * Member in the Romanian Fulbright Alumni Association
- * Member of the Romanian Association of Computer and Automatics Engineers

Languages spoken

English and French: fluent reading, writing and oral comprehension. Romanian - native

PhD Thesis

Sisteme de asistare a dezvoltării programelor. Reproiectarea programelor prin inginerie inversă (Computer Aided program development. Reverse engineering for program re-design), advisor Prof.dr.ing. C. Giumale (1994)

Publications:

23 Books and **56 book chapters**; more than **450 peer reviewed papers** at conferences (>20 at A ranked conferences, **155 ISI-WOS**, from which **27 in journals**, **8 in Q1**, **201 SCOPUS** indexed):

Web of Science ResearcherID E-6411-2011: <https://publons.com/researcher/627939/stefan-trausan-matu/>
ORCID: <https://orcid.org/0000-0001-8082-8497>

DBLP: <https://dblp.uni-trier.de/pers/hd/t/Trausan=Matu:Stefan>
SCOPUS: <https://www.scopus.com/authid/detail.uri?authorId=16318248100>
LinkedIn: <https://www.linkedin.com/in/stefan-trausan-matu-9296707/>
ResearchGate: https://www.researchgate.net/profile/Stefan_Trausan-Matu

Hirsch index:

Web of Science Core Collection	10
SCOPUS	16
Google Scholar	27

A small selection of papers:

- Stefan Trausan-Matu (2020) The Polyphonic Model of Collaborative Learning, in Mercer, N., Wegerif, R., & Major, L. (eds.), *The Routledge international handbook of research on dialogic education*, ISBN :978-1-138-33851-7, New York, NY : Routledge, pp. 454-468 (Q1 in ISI-WOS, Journal Impact Factor=2.8)
- Stefan Trausan-Matu, (2019) Is it possible to grow an I–Thou relation with an artificial agent? A dialogistic perspective, *Artificial Intelligence & Society, Journal of Knowledge, Culture and Communication*, ISSN 0951-5666, Vol. 34, Nr. 1, Special Issue: Ethics of AI and Robotics, Springer-Verlag London, pp. 9-17
- Stefan Trausan-Matu (2013) Collaborative and Differential Utterances, Pivotal Moments, and Polyphony, in Daniel D. Suthers, Kristine Lund, Carolyn Penstein Rosé, Chris Teplovs, Nancy Law (Eds.), *Productive Multivocality in the Analysis of Group Interactions*, Computer-Supported Collaborative Learning Series Volume 15, 2013, Springer, New York, pp 123-139
- Stefan Trausan-Matu, Mihai Dascalu, Traian Rebedea (2014) PolyCAFe—automatic support for the polyphonic analysis of CSCL chats, *International Journal of Computer-Supported Collaborative Learning*, 06/2014; Volume 9(2), Springer, pp. 127-156
- Nicolae Nistor, Mihai Dascalu, Yvonne Serafin, Stefan Trausan-Matu (2018) Automated dialog analysis to predict blogger community response to newcomer inquiries. *Computers in Human Behavior* 89: 349-354, Pergamon-Elsevier (Q1 in ISI-WOS, Journal Impact Factor =4.9)
- Westera, Wim, Mihai Dascalu, Hub Kurvers, Stefan Ruseti, Stefan Trausan-Matu (2018) Automated essay scoring in applied games: Reducing the teacher bandwidth problem in online training, *Computers & Education*, Pergamon-Elsevier, Vol. 123, pp. 212-224 (Q1 in ISI-WOS, Journal Impact Factor=5.9)
- Dascalu, M., McNamara, D.S., Trausan-Matu, S., Allen, L.K. (2018) Cohesion network analysis of CSCL participation, *Behaviour Research Methods*, Springer, Volume 50, Issue 2, pp 604–619, (Q1 in ISI-WOS, Journal Impact Factor=4.7)

27 April 2020