

# 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 <sup>st</sup> 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 <sup>nd</sup> 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 <sup>rd</sup> 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 - now 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, 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 (International Journal on Computer Supported Collaborative Learning - Springer, Computers in Human Behaviour - Elsevier) 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
- Computer-Supported Collaborative Learning;
- Social Software
- E-Learning
- Natural language processing
- Music and computers
- Human-computer interaction
- Philosophy, psychology, religion-science relation

Director for the Romanian part in European Union funded research projects (PEKADS, LarFLaST, IKF, Inf3S, SkyNurse, LTfLL), 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

- Vice-chair of ACM-SIGCHI, Romania
- Member of the Romanian Committee for the History and Philosophy of Science of the Romanian Academy
- 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, 2014, 2015 – 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; FLAIRS 2003 Special Track on Natural Language Applications, France - EGC 2005-2016; WBE 2007; ITS 2014, 2016; WITREC 2000, Bulgaria: AIMS-2000, 2016; Romania - TAMODIA-2002, 2004, etc.)
- \* Reviewer at conferences (IJCAI 2013; CSCL 2011, 2013; 2015; CHI 2003-2009; ECTEL 2009-2016, ICLS 2006, 2012, 2014, 2016; WBE 2007-2009, FLAIRS 2003, HCI-International 2003 Crete, ITS 2002, WITREC 2000, SCI-2003, 2002, 2001, ICALT-2001, 2007, 2010-2016, 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 (10)

Claudiu Muşat, Costin Chiru, Ştefan Dumitrescu, Vlad Posea, Ana Găinaru, Traian Rebedea, Mihai Dascălu, Clementin Cercel, Abdel Alnasser Alasfour, Raghad Jawad Ahmed Al-Shama'a

## Postdoc adviser

Mihai Dascalu, Traian Rebedea, Costin Chiru

## Master students

More than 70 master students were advised for their thesis: Răzvan Bunescu, Mihai Stroe, Claudiu Muşat, 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**

- \* Fulbright Scholar Post-doc, Drexel University, Philadelphia, Pennsylvania, US (2005)
- \* Romanian Academy Award (for 2013, awarded in 2015) for the Polyphonic Model
- \* Full member of the Academy of Romanian Scientists
- \* Member of CNATDCU (Consiliul Național de Atestare a Titlurilor, Diplomelor și 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:**

19 Books and 40 book chapters; more than 300 peer reviewed papers at conferences (>20 at A ranked conferences, (56 at ISI Proceedings) and journals (6 at ISI with impact factor, 5 with IF>1.8) – selections of publications are at <http://www.racai.ro/about-us/racai-staff/trausan/> and [https://cs.pub.ro/index.php/people/userprofile/stefan\\_trausan](https://cs.pub.ro/index.php/people/userprofile/stefan_trausan)

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