Curriculum vitae Bart de Boer

Personal data

family name: de Boer
first names: Bart
nationality: Dutch

Education

Primary: Berkenhof, Pijnacker 1976-1982
Secondary: Openbare Dalton Scholengemeenschap Voorburg Leidschendam (VWO) 1982-1988
final examination in the subjects:
Dutch, English, German, Latin, Physics, Chemistry, Mathematics and Geography.
University: Computer Science at Leiden University, 1988-1994
Master's thesis: *Classifier Systems: a useful approach to machine learning?*, Master of Sciences Thesis., departement of Computer Science of Leiden University, supervisor: dr. Ida-Sprinkhuizen-Kuyper. Grade: "met veel genoegen"
Ph. D. thesis: *Self-organisation in vowel systems*, defended June 4, 1999. Promotor: Luc Steels. Grade: "met grootste onderscheiding".

Work

1990-1994: Student assistant at Leiden University
1995-1999: Research Assistant at AI-Lab, VUB.
September-December 1999: Linguistic fieldwork on the Bahing language of East Nepal
January 2000-November 2000: Post-Doctoral assistant, AI-lab, VUB.
December 2000-February 2002: Post-Doctoral fellow, Center for Mind, Brain and Learning, University of Washington, Seattle, Washington, USA
March 2002-Present: Post-Doctoral assistant, AI-lab, VUB.

Teaching experience

1990–1994: Student assistant at Leiden University (exercises, correcting assignments and exams).
Introduction to programming
Computer organization
Management Information Systems
Written syllabus on intel 80x86 assembly language.
1995–1999: Assisted at different courses and seminars on AI and language, AI-Lab, VUB.
2001: Assisted at Speech and Hearing Sciences 101, University of Washington.
2001–2002: Responsibele for techniques of AI II (Speech recognition and synthesis) at VUB
2002–2003: Assisted at "Methoden Wetenschappelijk Onderzoek" (methodology) at VUB
Assisited at "Artificiële Intelligentie 1" (Introduction Artificial Intelligence) at VUB
Responsible for Artificial Intelligence evening courses at VUB
Assisting at introductory seminars computer science (geïntegreerd werkcollege) at VUB
1994–1999: Several lectures for lay audiences (see under talks and presentations).
2002–2003: Supervised several undergraduate and graduate students
2003–present: Assistant professor of cognitive robotics, Rijksuniversiteit Groningen

Award

1998: BNAIC 1998 best paper award.

Language Abilities

Dutch: Native Language
English: Fluent
French: Fluent
German: Conversational
Nepali: Conversational

Publications (* indicates refereed publication)

Bart de Boer (*to appear*) Self-organisation in Language, In: C. Hemelrijk (ed.) *Proceedings of the international workshop on Self-organization and Evolution of Social behavior*.

*) Bart de Boer (*to appear*) Infant-directed Speech and Evolution of Language, in: M. Tallerman (ed.) Evolutionary Prerequisites for Language, Oxford: Oxford University Press.

Jansen, Bart, de Boer, Bart and Belpaeme, Tony (*to appear*) You did it on purpose! Towards intentional embodied agents. *Dagstuhl seminar proceedings*. Springer, Berlin.

Edwin D. de Jong and Bart G. de Boer (*to appear*) *Dynamical Systems, Individual-Based Modeling, and Self-Organization*, in UNESCO encyclopaedia of Life Support Systems.

*) Bart de Boer (2003) Conditions for Stable Vowel Systems in a Population, in: Wolfgang Banzhaf, Thomas Christaller, Peter Dittrich, Jan T. Kim, Jens Ziegler (Eds.): Advances in Artificial Life, 7th European Conference, ECAL 2003, Dortmund, Germany, September 14-17, 2003, Proceedings. *Lecture Notes in Computer Science* **2801** Berlin:Springer 2003, pp. 415–424

Bart de Boer (2003) Modelling of Sound Systems, in: Kirby, S. (ed.) *Language Evolution and Computation Proceedings of the Workshop/Course at ESSLLI*, Vienna 2003 pp. 2–11

Bart de Boer & Willem Zuidema (2003) Phonemic Coding: Optimal Communication under Noise?, in: Kirby, S. (ed.) *Language Evolution and Computation Proceedings of the Workshop/Course at ESSLLI*, Vienna 2003 pp. 12–21

*) Bart de Boer, Patricia K. Kuhl (2003) Investigating the role of infant-directed speech with a computer model, *Acoustic Research Letters On-line* **4**(4) 129–134.

*) Bart de Boer (2003) Book Review of The Atoms of Language: The Mind's Hidden Rules of Grammar by Mark C. Baker and Foundations of Language: Brain, Meaning, Grammar, Evolution by Ray Jackendoff, In: *Artificial Life* **9** (1) 89–91

*) Belpaeme, Tony, de Boer, Bart, De Vylder, Bart and Jansen, Bart (2003) The role of population dynamics in imitation, to appear in: Dautenhahn, K. & Nehaniv, C. L. (eds.) *Proceedings of the AISB Second International Symposium on Imitation in Animals and Artifacts* pp. 171–175.

*) Jansen, Bart, De Vylder, Bart, de Boer, Bart & Belpaeme, Tony (2003) Emerging shared action categories in robotic agents through imitation, to appear in: Dautenhahn, K. & Nehaniv, C. L. (eds.) *Proceedings of the AISB Second International Symposium on Imitation in Animals and Artifacts pp.* 145–152

Bart de Boer (2002) How to keep a vowel system stable over time, *Vrije Universiteit Brussel AI-lab AI memo* **02-06**

Bart de Boer (2002) Evolving Sound Systems, In: Angelo Cangelosi & Domenico Parisi (eds.) *Simulating the Evolution of Language*, Berlin: Springer Verlag pp. 79–97

Bart de Boer (2001) *Learning distributions of adult-directed and infant-directed vowel tokens*, CMBL Technical report.

*) de Boer, B. G. & Kuhl, P. K. (2001) Infant-directed vowels are easier to learn for a computer model, *Journal of the Acoustical Society of America*, **110**(5 pt 2) p. 2703

de Boer, B. G. & Kuhl, P. K (2001) Human and computer acquisition of vowel categories, In: Smits, R., Kingston, J., Neary, T. M. and Zondervan, R. (eds.) *Proceedings of the Workshop on Speech Recognition as Pattern Classification*, Nijmegen, the Netherlands, July 11–13, 2001 pp. 115–120

*) Kuhl, P. K., Tsao, F.-M., Liu, H.- M., Zhang, Y. & de Boer, B. (2001) Language/culture/mind/brain. Progress at the margins between disciplines, *Annals of the New York Academy of Science*, **935** pp. 136–174.

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Bart de Boer (2001) *The origins of vowel systems*, Oxford University Press

*) Bart de Boer (2000) Self organization in vowel systems, *Journal of Phonetics* **28**, pp. 441–465

*) Bart de Boer (2000) *Imitation games for complex utterances*, In: Proceedings of BNAIC 2000

*) Bart de Boer (2000) *Emergence of vowel systems through self-organisation* AI Communications **13** (2000) pp. 27-39

*) Bart de Boer and Eric Postma *Artificial Intelligence research in Belgium and The Netherlands* AI Communications **13** (2000) pp. 9-11

Paul Vogt, Joris Van Looveren & Bart de Boer (2000) Robots leren luisteren, *Natuur en techniek* february 2000

*) Bart de Boer (2000) Emergence of sound systems through self-organisation. In: J. Hurford, C. Knight, M. Studdert-Kennedy *The Evolutionary Emergence of Language*, Cambridge University Press

Bart de Boer, Dolores Cañamero (1999) Situated Learning in Autonomous Agents. In: Joan Bliss, Roger Säljö & Paul Light (eds.) *Learning Sites: Social and Technological Resources for Learning*, Amsterdam: Pergamon pp. 236–248

*) Bart de Boer (1999) Evolution and self-organisation in vowel systems, *Evolution of communication*. **3**(1) pp. 79–102

Bart de Boer (1999) *Conference report IJCAI '99*, in BNVKI Newsletter.

Bart de Boer (1999) *Review of Simon Kirby's Function, selection, and innateness: the emergence of language universals*, in BNVKI Newsletter.

*) Bart de Boer & Paul Vogt (1999) Emergence of Speech Sounds in Changing Populations In: Dario Floreano, Jean-Daniel Nicoud & Francesco Mondada (eds.) *Advances in Artifical Life, Lecture Notes in Artificial Intelligence* **1674**, Berlin Springer Verlag, pp. 664-673

Bart de Boer *Self-Organisation in Vowel Systems* Vrije Universiteit Brussel AI-lab Ph. D. thesis (Defended june 4th, 1999)

*) Bart de Boer Investigating the Emergence of Speech Sounds In: T. Dean (ed.) *IJCAI-99*, San Francisco: Morgan Kaufman, pp. 364–369

*) de Boer, B. (1998) Emergence of sound systems through self-organisation, In: H. La Poutre & J. van den Herik (eds.) Proceedings Xth Netherlands/Belgium Conference on Artificial Intelligence. pp. 37-46

Bart de Boer Learning vowels using self-organisation AI-memo 97-20, 1997

Bart de Boer Emergent CV-syllables AI-memo 97-13, 1997

de Boer, B. (1997) Self organisation in vowel systems through imitation, In J. Coleman (ed.) Computational Phonology, Third Meeting of the ACL SIGPHON, July 12, 1997, pp. 19-25

*) de Boer, B. (1997) Generating vowels in a population of agents. In P. Husbands & I. Harvey (eds.) Proceedings of the Fourth European Conference on Artificial Life, MIT Press, pp. 503-510

de Boer, B.G. *Artificial Autonomous Agents and Learning Systems*, Student Report 94-34, department of computer science, Leiden University, 1994

de Boer, B.G. *An Autonomous Robot Learning Basic Behaviours*, Student Report 94-36, department of computer science, Leiden University, 1994

Steels, Luc and Bart de Boer: Learning Basic behaviours on autonomous robots, *Proceedings of Benelearn 95*, also appeared as AI-lab AI-memo 95-04, 1995

Talks and Presentations

October 24, 2003 Presentation at Belgisch-Nederlandse AI-Conferentie 2003, Nijmegen, the Netherlands

September 15, 2003 Presentation at European Conference on Artificial Life, Dortmund, Germany

September 2, 2003 Invited talk at the workshop on strategies in skill acquisition, Groningen, the Netherlands

August 2003 Two presentations at Language Evolution and Computation workshop at the European Summer School for Logic, Language and Information, Vienna, Austria.

December 2002: Poster presentation at the international symposium on imitation in animals and artefacts, Aberystwyth, UK

September 12, 2002: Presentation on self-organization in language on the international workshop on Self-Organization, and Evolution of Social Behavior, Monte Verita, Switzerland.

March 29, 2002: Presentation at Evolution of Language Conference, Harvard, USA.

December 5, 2001 Poster presentation at Acoustical Society of America conference, Fort Lauderdale, Florida, USA.

July 11–13, 2001, Presentation on computer modelling of speech acquisition at Speech as pattern recognition workshop, Nijmegen, the Nederlands.

September 16, 2000 Presentation SAB Workshop on evolution of language, Paris, France

April 2000, Presentation Evolution of language conference, Paris, France.

August 1999 Presentation paper at IJCAI, Stockholm, Sweden

February 25, 1999 Lecture for "Uitstraling Permanente Vorming" of the Vrije Universiteit Brussel in Brugge, Belgium.

November 18–19, 1998: Presentation paper at BNAIC 98, Amsterdam, the Nederlands.

July 2–4, 1998 Posterpresentation on self-organisation in vowel systems, LABPHON 6 conference, York, UK

May 5–7, 1998 Lecture on self-organisation in vowel- and consonant systems and visit to phonetics laboratory, Stockholm, Sweden

April 6–9, 1998 Presentation on self-organisation in vowel systems, Evolution of Language conference, London, UK.

July 28–31, 1997, Presentatie of paper at the European Conference on Artificial Life, Brighton, UK.

July 12, 1997, Presentation of paper at Special Interest Group in Phonetics of the Association for Computational Linguistics meeting, Madrid, Spain.

November 1996, Presentation on artificial intelligence for science teachers, Lunteren, the Netherlands

September 1996: Talk on evolution of language, SAB 96, Cape Cod, USA.

October 1995: Talk on autonomous robots, Leiden University, the Netherlands.

September 1994: Talks on autonomous robots and machine learning at summer school Varna, Bulgaria

Other academic activities

1992–1994: Student member subfaculty board of informatics, Leiden University, the Nederlands
1993–1994: Chief editor "Amphora" magazine of the student club of the faculty of natural sciences and mathematics, Leiden University, Nederland
1993–1994: Secretary "Leidse Universitaire Schermvereniging" (Leiden University Fencing Club), Leiden University, the Nederlands
1996–1997: Member of European Science Foundation task force on learning in humans and machines.
October 2000: Organisation of Belgian-Dutch workshop on evolution of language (Bene-Evolang), with Paul Vogt, Brussel + editing proceedings.
Reviewed for *Computational Linguistics*, Evolution of language conference, Evolution of language workshop, Developmental Embodied Cognition workshop, Learning robots workshop.