

Zsófia Ruttkay
Creative Technology Lab
Media Institute
Moholy-Nagy University of Art and Design
H-1121 Budapest, Zugligeti ú 9-25. Hungary

<http://create.mome.hu/ruttkay>
tel: 00 36 6 20 253 8697
fax: 00 36 1 392 1198
e-mail: ruttkay@mome.hu

Zsófia Ruttkay

PERSONAL DATA

Born 1955, Budapest, Hungary
Citizenship Dutch and Hungarian
Family married, one child
Languages **English** (excellent), **Dutch** (fluent, 'Dutch as second language' certification),
Hungarian (mother tongue), **French** and **Russian** (medium).

CURRENT RESEARCH INTEREST

- Applications of new interactions technologies for musea and cultural heritage.
- Interactive books for children for reading and educational purposes.
- Multimodal communication, embodied conversational agents, social behavior and cognitive modeling.
- Inquiry-based learning, E-learning, games for education and (physical) training.

EDUCATION

PhD 2003 at Budapest Technical University, on 'Computer Facial Animation'
PhD/Dr¹ 1990 at Budapest Technical University, with 'Summa cum laude', on 'An intelligent graphical editor for fixture design'
MSc 1979 in Mathematics at Eötvös Loránd University, Budapest, first-class honors
High school 1974, Radnóti Miklós Gimnázium, Budapest, extended curriculum in mathematics, English and arts

CURRENT WORK

2009- ... Associate Professor, Head of Creative Technology Lab, Media Institute, Moholy-Nagy University of Art and Design, Budapest

- Heading Creative Technology Lab, developing research and educational program, technological and human infrastructure.
- Investigation of applying computer technology for the arts, as interactive medium of creation, reconstruction and scholarly investigation.
- Application of novel interaction technologies e.g. in musea, urban spaces and e-learning.
- WP leader in the EUFP7 ICT TERENCE project on teaching text comprehension with interactive computer games for handicapped children.

¹ This title was equivalent to PhD until 1995. PhD was acquired later for eventual Hungarian prospects.

- 2009- ...** **Scientific Advisor at Dept. of Computer Science, University of Twente, The Netherlands**
- Supervising the Creative Technology BA.

PRIOR WORK EXPERIENCE

- 2004- 2009** **Associate Professor at Human-Media Interaction, Dept. of Computer Science, University of Twente, The Netherlands**
- Research on synchronization of multimodal behaviour for virtual characters.
 - Inventor of the Creative Technology BA, a novel interdisciplinary education on the intersection of technology, science and design. Developed all accreditation documents.
- Guest professor (0.2) at Pázmány Péter Catholic University, Faculty of Information Technology, Hungary**
- Lecturing on Virtual Humans and supervising student projects.
 - Collaborating on the first Hungarian Talking Head
 - Virtual Humans special seminar at ELTE.
- 1997-2004** **Senior researcher at the Center for Mathematics and Computer Science, Amsterdam**
- Group leader at CWI of the FASE national project. Research on emotional facial expressions and their rendering on 2D non-photorealistic and 3D realistic facial models.
 - Design and implementation of a software to define and interactively edit facial expressions on synthetic faces. The resulting CharToon software has been used by international partners (University Roma La Sapienza, Italy, Intelligent Machines USA, KU Hungary, VU, KUB and Philips Research, The Netherlands) and is being marketed by the Epictoid Company.
 - Research on declarative motion processing, design of interval-constraint based motion editing facilities.
 - Design and development of the GESTYLE language, to define the style of nonverbal communication of synthetic characters. Application of GESTYLE for full-body avatars in VRML. Evaluating ECAs, and providing design guidelines for different applications.
- 1994-1997** **Founder and executive director of the Vierkant voor Wiskunde (Fun in Maths) Foundation, located at the Dept. of Mathematics and Computer Science, Vrije Universiteit, Amsterdam**
- Implementation of off-school mathematical programs (summer camps, clubs, markets), based on inquiry-based Hungarian traditions. The camps are still attracting increasing number of pupils.
 - Editing and authoring supporting material: workbooks, interactive software
 - Running seminars for Dutch teachers, organizing study visits to Hungary
 - Talks about experiences and methodology on national and international professional forums and in the national media
- 1997** **Guest at General Design, Amsterdam**

- Design and implementation of an interactive graphical environment to explore historic mathematical drawing machines (collaboration with University of Modena)

- 1990-1994** **Guest researcher at the Artificial Intelligence Group at the Department of Mathematics and Computer Science of the Vrije Universiteit, Amsterdam**
- 1984-1992** **Research fellow at the Artificial Intelligence Group of the Computer and Automation Institute of the Hungarian Academy of Sciences, Budapest**
- 1983-1984** **Scientific fellow SYSTEM Computer Service Enterprise, Budapest**
- 1979-1984** **Scientific fellow at the Central Statistical Office for State Administration, Budapest**
- 1979-1980** **Eötvös Loránd University, Budapest**
Assistant professor at the Algebra Department
- 1976-1982** **KÖMAL Secondary School Maths Journal, Budapest**
Co-worker, later on the editorial board

TEACHING RECORDS

- 2009-...** **MOME**
VisualMaths, Codes of Nature, Programming for Designers, BudapestHakz, Serious Games, FacialAnimation
- 2004-2009** **HMI, Dept. of CS, University of Twente, The Netherlands**
Embodied Conversational Agents
Art and Media Technology
Student projects (touch-table, interactive graffiti, visual sound, 3d reconstructions of art pieces from the Renaissance, facial animation)
- 1979-1980** **Eötvös Loránd University, Budapest**
Algebra courses, assistant

PROFESSIONAL ACTIVITIES

Events (co-)organized

- 2012** **Member of European Youth Award Jury**
- 2011-12** **Transfor@Lab International Summer School coordinator and mentor**
- 2009-12** **TechTea seminars at MOME**
- 2009** **Intelligent Virtual Agents (IVA2009), General Chair**
- 2008** **BRIDGES Conference, Leeuwarden**
GALA at IVA2008, Tokyo, Japan
Measuring Behavior Symposium, Maastricht
- 2007** **GALA at IVA07 Paris**
2nd Behavior Markup Language Workshop, Paris
- 2006** **GALA at IVA06 Marina del Rey, USA**

- 2005** **Integrating Perception and Action in Multimodal Interfaces Workshop**, AAMAS05 Utrecht
GALA at IVA05 Kos, Greece
- 2004** **International Seminar on Evaluating ECAs**, Dagstuhl, Germany
Balanced Perception and Action in ECAs Workshop, AAMAS04, New York
- 2003** **Embodied Conversational Characters as Individuals Workshop**, AAMAS03, Melbourne, Australia
- 2002** **Embodied Conversational Agents – Let’s Specify and Evaluate them! Workshop**, AAMAS02, Bologna, Italy
- 2001** **Benelux Symposium on Embodied Conversational Agents**, Amsterdam
- 2000** **Founding member of Mindmakers.org**, an online forum for open development of communicative humanoids and related AI middleware.
- 1999** **Benelux Symposium on Facial Animation**, Amsterdam
- 1996** **Non-Standard Constraint Satisfaction Workshop**, ECAI, Budapest, Hungary
- 1994** **Applied Genetic and Other Evolutionary Algorithms Workshop**, ECAI, Amsterdam, The Netherlands
Constraint Processing in CAD (CoPiCAD) Workshop, AI in Design, Lausanne, Switzerland
- 1989** **Special Session on Graphical Editing**, HCI International, Boston, USA

Other scientific activities

- 2003-...** **Program committee member of ACM Autonomous Agents and Multi Agent Systems**
- 2005-...** **Program committee member of Intelligent Virtual Agents**
- 2007-...** **Program committee member of Computer Animation and Social Agents**
- 1987-** **Reviewer** for numerous conferences (Eurographics, Constraints, CHI, IUI, FLAIR, CASA, AISB Symposia, etc.) and journals (IEEE Transactions, ACM Multimedia, Interacting with Computers, Computer Graphics Forum, etc.)
- 2003-** **Reviewer and evaluator for EU-IST projects**
- 2000-2009** **Board Member of the Ars et Mathesis Foundation**

Visits and invited talks

- 2012** Demo of Interactive Books at Designing Interactive Systems Conference, Newcastle, UK
- 2011** Guest lectures at University of Tampere, University of Riga
- 2010** Atagonistic Vision, Pecs, Invited talk and 2-days workshop on Algorithmic Image Processing
- 2009** Art22 Gallery, invited talk on Science and Technology
- 2008** Advanced Telecommunication Research, Nara, Japan
 University of Debrecen, Hungary (ERASMUS visit)
- 2007** University of Augsburg, Germany
 ISAGA WS invited talk, Nijmegen
 Portsmouth University
 Rátz László Konferencia
- 2006** University of Bolzano, Invited lectures and consultancy
 Kossuth Lajos University, Debrecen, Hungary

- Central-European Conference on Virtual Reality
USC, Information Sciences Institute, Marine del Ray, USA
- 2005** Szent-Györgyi Fellow at the Pázmány Péter Catholic University, Budapest
Invited talk at the Summer School on Image Processing, Szeged, Hungary
- 2003** University Paris VIII
National University of Singapore
University of Birmingham
Semmelweis University Budapest
- 2002** MTA SZTAKI, Budapest – Center for Excellence Visitor
- 2001** University Roma Tre;
University Roma La Sapienza;
- 2000** University of Cape Town, South Africa
- 1999** Fraunhofer Institute, Darmstadt, Germany
- 1998** MiraLab, University of Geneva;
- 1987** University Tokyo, Japan;
CWI, Amsterdam.

Projects, scholarships and awards

- National** In the Netherlands: **GATE** (2007-...), **FASE** (STW 1996-2001)
- EU** Participant in the TERENCE FP7 STREP project (2009-...)
Work Group Lieder of **COST 2102 Action** (2007-2010)
Participant in **AMI EU IST** (2004-2007), **HUMAINE EU IST** (2004-2007)
Sub-contracted to **Ambience** (EU IST 2000 - 2003)
- Scholarships** **Szent-Györgyi Fellowship** (Hungarian Ministry of Education, 2004)
Center of Excellence Fellowship (SZTAKI Budapest, 2002)
- Awards** **Best demo paper** (WWW Conference, 2000)

In the public media

- 2009-12** Interviews in Hungarian printed and online media and television
- 2008** Kossuth Rádió
- 2007** Tudósportrék (Porter of a scientist) – Kluwer (in Hungarian)
- 2007** Kossuth Rádió
- 2006** 168 óra (Hungarian weekly national journal)
- 2005** AgentPortal
Kossuth Rádió
- 1995** Chicago Times
- 1995** Jeugdjournal (Dutch Television)
NRC Handelsblad
- 1994** NRC Handelsblad (Dutch daily national newspaper)

PUBLICATIONS

1994-... Over 160 scientific publications in books, international journals and reviewed conference proceedings. Editor of 4 volumes at Springer and Kluwer. Also publications of art games and teaching materials (in Dutch), and articles on constructivistic education.
See full list of publications in separate document.