

CURRICULUM VITAE

Jozsef KOLOSZAR

DATE AND PLACE OF BIRTH: 17 July, 1978
BIRTH: Sopron, Hungary
CITIZENSHIP: Hungarian
EMAIL: kolijoco@yahoo.com

DEGREES:

2008. April. 24. Ph.D.
(Thesis: Virtual Colonoscopy)
School of Informatics
Faculty of Electrical Engineering & Informatics
Budapest University of Technology and Economics
Budapest, Hungary

2002. June 26. M.Sc.
(Thesis: Virtual Colonoscopy)
Computer Science (Technical Informatics)
School of Informatics
Faculty of Electrical Engineering & Informatics
Budapest University of Technology and Economics
Budapest, Hungary

EDUCATION:

2004 – 2005 Ph.D. Student (Fulbright Fellow)
Department of Computer Science
State University of New York at Stony Brook
Stony Brook, New York, U.S.A.

2002 – 2004 Ph.D. Student
School of Informatics
Department of Control Engineering and Information Technology
Faculty of Electrical Engineering & Informatics
Budapest University of Technology and Economics
Budapest, Hungary

1997 - 2002 Major in Informatics
Specialized in Robotics and Fault Tolerant Systems
Faculty of Electrical Engineering & Informatics
5-year BS-MS Program
Budapest University of Technology and Economics
Budapest, Hungary

1994 - 1995	Pittsburgh Taylor Allderdice High School (12th Grade) Pittsburgh, Pennsylvania, U.S.A. CAS AP Exams: Calculus BC (5), Physics C (5), Chemistry C (5)
1992 - 1997	Szechenyi Istvan High School Major in Physics and Biology Sopron, Hungary
1989 - 1990	Blacksburg Middle School (8th Grade) Blacksburg, Virginia, U.S.A.
1983 - 1992	Orsolya Elementary School Major in Mathematics Sopron, Hungary

LANGUAGES SKILLS:

Hungarian (mother tongue)
English (excellent)
German (good)
Latin (fair)

SPECIAL RECOGNITIONS:

- 1988 National Subject Contest in Mathematics - 5th place - Hungary;
- 1995 JETS TEAMS (Junior Engineering and Technical Society Test of Engineering Aptitude, Mathematics and Science) - 7th place (national) - U.S.A.;
- 2000 BME College Research Conference
1st place, Ericsson Award & IEEE Student Membership;
- 2001 XXV. Hungarian Student Research Conference
Informatics, Computer Graphics and Multimedia - 1st place & Graphisoft Award;
- 2001 Central European Seminar on Computer Graphics 2001
Best Paper Award & Outstanding Presentation Award;
- 2001 Hungarian National Academic Scholarship;
- 2002 Hungarian National Doctoral Scholarship;
- 2003 Spring Conference on Computer Graphics 2003
Springer 1st Best Paper Award
- 2004 Fulbright Student Fellowship Recipient
One academic year (2004/05) at State University of New York at Stony Brook

PROFESSIONAL SKILLS:

Software development

Languages: C++ and Java, also C, Assembly, graphics shader languages.
Technologies: MFC, .NET, D3D, OpenGL, QT, Xlib (linux)
Special expertise: computer graphics (3D medical diagnostic visualization) and image processing, high-performance algorithms and optimization.
Additional interest: network programming, fault tolerant computing, stochastic modeling and simulation.

Internet

Development of TCP/IP and UDP based applications
Development of HTML/Java applications

Operating Systems

Microsoft Windows system administration
UNIX/Linux system administration

Education

Lecturing full undergraduate courses and labs, supervising student research projects

WORK EXPERIENCES:

- 2005 June – Present: Software Developer,
eRAD Image Medical Inc.
Development: Tele-radiology, PACS, visualization solutions, cross-platform technologies
- 2005 Sept – present: Associate Professor (2011-), Lecturer
Institute of Informatics, University of Western Hungary
Teaching: Software Development, Information Systems Security, Computer Graphics
- 2004 Sept – 2005 June: Ph.D. Student,
Department of Computer Science, State University of New York at Stony Brook, Stony Brook,
New York, U.S.A.
Research: Virtual Colonoscopy, Computer Aided Diagnostics
- 2002 Sept – 2004 June: Ph.D. Student,
Department of Control Engineering and Information Technology, Faculty of Electrical Engineering
and Informatics, Technical University of Budapest, Hungary.
Research: Interactive Volume Visualization,
Teaching: Object Oriented Programming Lab
- 2001 Spring Semester: Teaching Assistant
Department of Control Engineering and Information Technology, Faculty of Electrical Engineering
and Informatics, Technical University of Budapest, Hungary.
Teaching: Computer Networks Lab
- 2001 Jan - 2003: Software Developer.
Department of Space Technology, KFKI Research Institute for Particle and Nuclear Physics of
the Hungarian Academy of Sciences, Budapest, Hungary.
Project: Software development for the Rosetta Lander (ESA) project
- 2001 Sept – Nov.: Research Fellow.
Applied Management and Computing Division, Applied Computing, Mathematics and Statistics
Group, Lincoln University, Christchurch, New Zealand.
Research: Stochastic Partial Differential Equations: Solute Transport in Porous Media

PROFESSIONAL AND SCIENTIFIC SOCIETIES:

- 2000 - Institute of Electrical and Electronic Engineering (IEEE), Student Member

PUBLICATIONS:

Book Chapters

- Michael Wimmer, Andrej Ferko, Laszlo Szirmay-Kalos, Helwig Hauser: CESC G 2000-2005 Best Papers Selection, Österreichische Computer Gesellschaft, 2006.

International Journals

- Koloszár, J. & Jae-Young, Y (2003): Accelerating Virtual Endoscopy. *Journal of WSCG, Vol 11. No. 2, ISSN 1213-6972, 2003, Plzen, Czech Republic*
- Szijarto G., Koloszar, J.: Real-time Hardware Accelerated Rendering of Forests at Human Scale, *Journal of WSCG, Vol.12, No.1-3, ISSN 1213-6972, 2004, Plzen, Czech Republic*

International Conference and Seminar Papers

- Jocha, Dávid & Koloszár, József (2001): Direct Volume Rendering Based Interactive Virtual Colonoscopy. *Central European Seminar on Computer Graphics 2001 Proceedings p: 10-22, Budmerice, Slovak Republic, <http://www.cg.tuwien.ac.at/studentwork/CESCG-2001/>*

Tarján Z, Zágoni T, Szilvás A, Székely G, Koloszar J, Jocha D, Makó EK (2003): Three-Dimensional Computed Tomography in Inflammatory Bowel Disease in Pavone P, Debatin S. *Syllabus „3rd International Workshop on Multislice CT, 3D Imaging, Virtual Endoscopy” Springer-Verlag Milano 2003 pp. 187-192*

Szijartó G. & Koloszar, J (2003): Hardware Accelerated Rendering of Foliage for Real-time Applications. *Spring Conference on Computer Graphics 2003, April 24-26, 2003, Budmerice, Slovak Republic (best paper award)*

Balázs Csébfalvi, József Koloszar, Zolt Tarján: Vector Quantization for Feature-Preserving Volume Filtering, *Vision, Modeling, and Visualization, Stanford, California, USA, pages 363-370, 2004*

(submitted for review)

József Koloszar, László Szirmay-Kalos, Zolt Tarján, and Dávid Jocha: Shape Based Computer Aided Diagnosis and Automated Navigation in Virtual Colonoscopy, *Submitted to Computer Graphics Interface 2006, Quebec, Canada*

International Conference Presentations

Tarján, Zs., Koloszar, J., Forgács, B., Kovács, G., Hart, M., Daus, H-J. (2005): Effect of CAD in CT Colonography: Diagnostic Accuracies and Evaluation Times Using an Academic Software. *99th Scientific Assembly and Annual Meeting of the Radiological Society of North America RSNA 2005, Chicago, 2005.*

Tarján Zs, Koloszar J, Szirmay-Kalos L, Kovács G, Vígváry Z, Makó EK. (2004): ColVis: A PC-based Software for Low-dose Scan, Colon Preparation-less CT Colonography, *98th Scientific Assembly and Annual Meeting of the Radiological Society of North America RSNA 2004, Chicago, Nov 28-Dec 3, 2004, Abs.: Radiology SSC18-05*

Tarján Zs, Koloszar J, Forgács B, Szirmay-Kalos L, Zágoni T, Makó EK. (2005): Observer and computer assisted diagnosis reading in CT colonography: initial results, *16th Annual Meeting of European Society of Gastrointestinal and Abdominal Radiology ESGAR 2005, Florence, Italy, May 28-31, 2005.*

Jocha, Dávid & Koloszar József (2002): Direct Volume Rendering Based Virtual Colonoscopy. *European Congress of Radiology March 2002 Vienna, Abstr.: Eur.Radiol. 12, Suppl.1.B-0975 2002.*

Tarján Zs, Zágoni T, Székely Gy, Koloszar J, Jocha D, EK Makó (2002): Virtual colonoscopy of inflammatory bowel disease, *European Congress of Radiology March 2002 Vienna, Abstr.: Eur.Radiol. 12, Suppl.1.B-0479 215.p. 2002.*

Tarján Zs, Koloszar J. (2004): Virtual colonoscopy, *36th Annual Scientific Meeting of The Hungarian Medical Association Of America, 24-29 October, 2004 in Sarasota, Florida. Invited Talk*

Túróczy G, Tarján Z, Jocha D, Koloszar J, Makó EK (2002): Our experience with a self-developed virtual endoscopy program, *Slovenian-Croatian-Hungarian Radiological Symposium, Maribor, Sept 19-20. 2002.*

Tarján Z, Zágoni T, Székely G, Jocha D, Koloszar J, Vígváry Z, Makó E. (2002): Virtual colonoscopy of inflammatory bowel disease, *Slovenian-Croatian-Hungarian Radiological Symposium, Maribor, Sept 19-20. 2002.*

National (Hungarian) Conference and Seminar Papers

Jocha, Dávid & Koloszar, József (2002): Virtual Colonoscopy using Direct Rendering of Surfaces from Volumetric Data. *3rd National Conference on Image Processing and Shape Recognition, Domaszék, Hungary, Jan 23-25, 2002.*

Koloszar, József. & Jocha, Dávid (2002): Accelerating Volumetric Ray Tracing in Virtual Endoscopy. *1st Hungarian Conference on Computer Graphics, Budapest, Hungary, May 28-29, 2002.*

J. Koloszá, L. Szirmay-Kalos: Automatic Centerline Extraction from Tubular Volumetric Structures, *KÉPAF 2004, Miskolc*, 2004, Magyarország

Koloszá J, Szirmay-Kalos L, Tarján Zs. (2005): *Computer Aided Diagnosis based on Second Derivates of the Volume Data*, Harmadik Magyar Szamitogepes Grafika és Geometria Konferencia, Budapest, 2005 nov 17-18. pp 71-78. ISBN 963-421-593-9

National (Hungarian) Conference Presentations

Tarjan, Zs., Zagoni, T., Szekely, Gy., Koloszar, J., Jocha, D., Mako, E. K. (2002): Computed Tomography in Inflammatory Bowel Disease. *21th Congress of the Hungarian Radiologist Society, Szeged, Hungary, August, 2002, Abs.: Magy.Radiol. 76, No.4.*

Tarján Zs, Koloszá J. (2004): Virtuális kolonoszkópiás szoftverkomponensek fejlesztése és értékelése, *A Magyar Radiológusok Társasága XXII. Kongresszusa, Balatonfüred, június 24-26, 2004, Abs: Magyar Radiológia 2004;78:*

Tarján Zs, Koloszá J., Zagoni T., Vacha J., Forgács B., Vígváry Z., Balázs Gy., Makó E. (2004): Béltisztítás nélküli CT kolonográfia: kezdeti tapasztalatok, *A Magyar Radiológusok Társasága XXII. Kongresszusa, Balatonfüred, június 24-26, 2004, Abs: Magyar Radiológia 2004;78:*

Túróczy G, Tarján Zs, Jocha D, Koloszá J. (2002): Our experience with self-developed virtual endoscopy program, *Magyar Gasztroenterológiai Társaság. 44. Nagygyűlés, Balatonaliga, 2002 június, poster, Abstr.: Zeitschrift für Gastroenterologie 40, 142. 362.p. 2002.*

Tarján Zs, Koloszá J, Forgács B, Wacha J, Kovács G, Zagoni T. (2005): *Diagnostic performance of a CAD system in the detection of colonic polyps in virtual colonoscopy*, Magyar Gasztroenterológiai Társaság 47. Nagygyűlése, Balatonaliga Június 7-11, 2005, Abs pp: 137, Abs.: Zeitschrift für Gastroenterologie 43; pp 520 2005.

Student Research Conference Paper

Jocha, Dávid & Koloszá, József (2000): Virtuális kolonoszkópia térfogatvizualizációs módszerekkel. [Volume rendering based interactive virtual colonoscopy] *2000/2001 Student Research Conference Paper, Department of Control Engineering and Information Technology, Budapest University of Technology and Economic, 24 pp. (1st prize, national, special recognitions)*

Additional

Koloszar, Jozsef (2002): Virtual Colonoscopy. MS Thesis. Department Control Engineering and Information Technology. College of Electrical Engineering & Informatics, Budapest University of Technology and Economics, Budapest, Hungary. 66 pp.

Koloszar, Jozsef (2007): Virtual Colonoscopy. PhD. Thesis. Department Control Engineering and Information Technology. College of Electrical Engineering & Informatics, Budapest University of Technology and Economics, Budapest, Hungary. 107 pp.