

# CURRICULUM VITAE

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**Date of Birth:** 11 July 1957

**Status:** single

## Research interests

- Computer graphics (photorealism in computer graphics, scientific visualisation, modelling techniques)
- Geometric Algebra (general theory and applications in the fields related to computer graphics)
- Data structures and algorithms (especially those used in the fields of: computational geometry, computer graphics (spatial and metric data structures) and image processing)
- Parallel applications (parallel algorithms in the above mentioned fields)
- Applied mathematics and scientific computing

## Career history and work experience

### Between 1 May 2002 until 30 June 2003

Postdoctoral fellow at Computer Science Institute, Faculty of Sciences, University of Amsterdam, The Netherlands (Intelligent Autonomous Systems Group)

### From 20 March 2000

Associate Professor (Maître de Conférences) at Computer Science Department, Faculty of Automatic Control and Computers, University POLITEHNICA of Bucharest

### From 1992 to 1999

Lecturer at Computer Science and Engineering Department, Faculty of Automatic Control and Computers, University POLITEHNICA of Bucharest

At University POLITEHNICA Bucharest I am actually teaching courses at following disciplines:

- Computer Graphics (Faculty of Automatic Control and Computers, computer science department, 3-rd year)
- Operating Systems (Faculty of Automatic Control and Computers, computer science department, 3-rd year)

Until 2003 I was teaching the following course classes

- Data Structures and Algorithms (Faculty of Automatic Control and Computers, Control systems department, first year)
- Algorithms and Programming Techniques (Faculty of Electrical Engineering - speciality Mathematical Engineering, 4-th year)
- Operating Systems (Faculty of Electronics and Telecommunications - department Telecommunications, fourth year)
- Graphics Applications (Technical College No. 2 - speciality Computers, second year)

I was teaching application classes at the following disciplines

- Data structures and Algorithms (Faculty of Automatic Control and Computers, computer science department, 1-st year of study)
- Elements of Computer Graphics (Faculty of Automatic Control and Computers, computer science department, 3-rd year)
- Graphics Systems Design (Faculty of Automatic Control and Computers - computer science department, 4-th year)
- Operating Systems (Faculty of Automatic and Computers - computer science department, 4-th year)
- Operating Systems Design (Faculty of Automatic Control and Computers, computer science department, 4-th year)

I was also teaching programming classes (C and Pascal) (course and application) at other faculties (chemistry (1990-1992), material sciences (1992-1995) and mechanical engineering (1992-1998)) at University POLITEHNICA Bucharest.

#### **Affiliations**

Member of ACM since 1995.

#### **From 1990 to 1992**

Teaching assistant at Computer Science and Engineering Department, Faculty of Automatic Control and Computers, University POLITEHNICA of Bucharest

#### **From 1983 to 1990**

Scientific researcher at Research Institute for Computers (I.T.C.) Bucharest, C.A.D. Electronics Department

#### **At Research Institute for Computers (I.T.C. Bucharest):**

I participated at the design and implementation of a Computer Aided Engineering System called ELECTRO-CAD. The main components of the system are: - PIX - Printed Circuit Boards Design Interactive System - SIX - Schematics Editor - NLE - Net List Extractor - LIX - Logic level simulation program of digital electronics designs My contributions were especially at: - LIX subsystem (design and implementation of the simulation kernel; design and implementation of the electrical shape description language; design and implementation of the stimuli language; design and implementation of functional models for different digital electronic components) - PIX subsystem (partial implementation of general postprocessing subsystem; design and implementation of command programs for different plotters, photoplotters and drilling machines; implementation of memory management subsystem) The ELECTRO-CAD system had 15 installations in Romania (Computer Factory Bucharest, Electrotehnica Factory Bucharest, Research Institute for Electronics Bucharest, etc.), 22 installations in the former German Democratic Republic (VEB Microelektronik Erfurt, Schiffbau Kombinat Rostock, Funkwerk Köpenick Berlin etc.), 5 installations in the former Federal Republic of Germany (Aristo GmbH Hamburg), two installations in the former Soviet Union (Chimavtomatika Moscow).

I participated at technical assistance programs concerning the ELECTRO-CAD project.

At I.T.C. I implemented other different programs as: Tektronix 4012 emulator on Romanian Intel based microsystems; a graphic editor for character set design at Rom Control Data Bucharest. • I participated to a cooperation program with Research Institute for Electronics in Zilina (Slovakia) for the design automation of the gate arrays circuits.

#### **From 1981 to 1983**

System Engineer at Department mini and microcomputers of the Territorial Computer Centre Ploiesti, Romania. In that period:

I implemented on Romanian PDP-11 compatible computers a graphic library (FORTRAN callable routines) for work with the plotter DIGIGRAF 1712.

I used data transmission applications (based on RJE and TMMVU protocols) on Romanian mini and microcomputers.

## Education

- Postdoctoral studies at University of Amsterdam, The Netherlands, 2003, Theme: “Geometric algebra a new foundation for computer graphics”, coordinator Prof. dr. Leo Dorst
- Ph. D. in computer science, at University POLITEHNICA of Bucharest, 1997, Ph. D. thesis “Data Bases for Graphics Processing”, coordinator Prof. Dr. Eng. Mircea Petrescu
- Faculty of Automatic Control and Computers, Polytechnic Institute of Bucharest, 1976 - 1981. General graduation mark: 9.72 (on a scale from 5.00 to 10.00) Graduation project (speciality computers software): Partitioning of electronic systems, (mark 10)
- College “Mihai Viteazul”, Ploiesti, 1972 - 1976, First prize of Chemistry Contest, 1972 Mention of Mathematics Contest, 1972, 1974 Winner of “National Problem Solver Contest” organised by “Gazeta Matematica” (“Romanian Mathematics Gazette”) 1975 Graduation exam (baccalaureate) with mark 10 (on a scale from 0 to 10)
- School “Al. I. Cuza”, Ploiesti, 1964 -1972, First prize of Chemistry Contest, Department Prahova, 1971

## Hobbies

- classical and pop music
- cultural tourism

Dr. Marius Dorian Zaharia

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