

Curriculum Vitae - **Romeo Anghelache**

Birth: 1964, Vatra Dornei, Romania
Nationality: Romanian
Contact e-mail: romeo@roua.org
Languages: English (C1.2), French (B2.2.2), German (B1.1), Italian (B1.1)

Formal education

- 1993 - 1998 PhD in Condensed Matter Physics, [“Al.I.Cuza” University, Iasi, Romania](#); Thesis title: “Monte Carlo studies on the mixed state of High-Tc superconductors”
- 1985 - 1989 License diploma in physics, Faculty of Physics, [“Al.I.Cuza” University, Iasi, Romania](#), (Second award at 1986 National Conference of Students in History & Philosophy of Science)(1989 - Thesis title: “Informational aspects of statistical mechanics”)
- 1982 - 1985 Radiolocation college (electronics engineering), Braşov, **Romania**;
- 1978 - 1982 high-school (Mathematics-Physics profile), bacculaureate, Câmpulung Moldovenesc, **Romania**

Work experience

2013.09-2019.08: document management assistant,
[European Commission](#), EU Satellite Navigation Programme Management unit,
Bruxelles, **Belgium**

Responsible for designing flows of electronic documents, document location services, collaborative editing, curation and archiving for ~600.000 electronic items.

2011.11-2013.08: software developer,
[FIZ-Karlsruhe/Zentralblatt MATH](#), Berlin, **Germany**

Responsible for tasks in the [European Digital Mathematics Library](#):

- internal evaluation of the [EuDML](#) project.
- integrating and curating the ElibM (<http://www.emis.de/ELibM.html>) collection metadata for exporting to EuDML.

2006.11-2007.12: knowledge management specialist,
[International Atomic Energy Agency](#), Vienna, **Austria**

Responsible for implementing and managing new information resources,

organizing technical meetings focused on knowledge preservation and access:

- implemented a taxonomy-based, full-text search service (based on the Lucene.NET engine),
- organized two technical meetings on knowledge preservation in the nuclear energy domain.

2006.01-2006.10: research consultant,

[Design Science](#), Long Beach, California 90802, **U.S.A.**; Reference: Robert Miner, Director, New Product Development, Tel: +1 (651) 223-2883, e-mail:robertm@dessci.com

Responsible for:

- testing conversion (by Hermes, developed below) of TeX articles from **arXiv.org** into XML, MathML and Unicode (**NSF funded** research project).

2002.09 - 2005.08: research programmer, research consultant,

[Max-Planck Institute for Gravitational Physics, Potsdam, Germany](#).

Reference: prof. Bernard Schutz (director), Contact Phone: +49-331-567-7218; e-mail:Bernard.Schutz@aei.mpg.de; prof. Bernd Wegner, Contact Phone: +49-30-399-93411; e-mail: Bernd.Wegner@springer.com

Responsible for implementing a software prototype in the [MoWGLI research project](#), **E.U. funded, IST** programme:

- designing and implementing a semantic authoring and e-publishing software tool for scientific articles authored in LaTeX containing mathematics, called **Hermes**.
- e-publishing an XML+MathML+Unicode instance of Living reviews in relativity;
- presentations in research workshops and international lectures

2000.03 - 2002.08: post-doctoral research associate, psycholinguistics

[Carnegie Mellon University, Pittsburgh, PA, U.S.A.](#); Reference: prof. Brian MacWhinney, contact phone:+1-412-268-3793, e-mail: macw@mac.com

Responsible for a series of tasks in the **TalkBank** project (**NSF funded**):

- constructed a validating grammar for the [CHILDES corpora of annotations in CHAT format](#), and, using this grammar, curated the legacy data, in collaboration with prof. Brian MacWhinney;
- built the CHAT XML-Schema vocabulary, the richest structural part of the [Talkbank schema](#),
- built a CHAT parser/translator to XML and exported the CHILDES corpora (about 10000 files, in about 26 different languages, containing structured psycholinguistic annotations) to the Talkbank ontology. The entire new collection of files was validated by the Talkbank schema.
- e-published an instance of these documents (transcriptions with synchronized links to videos of the corresponding interviews) and made it OAI compliant.

1999.09 – 2000.02: post-doctoral research associate, physical chemistry
Duquesne University, Pittsburgh, PA, **U.S.A.**;
•built a statistical simulator of the 2D parking model (**NSF funded**
research project).

1990.11 – 1999.08: physicist researcher
[National Institute of R&D for Technical Physics](#), Iași, **Romania**.
• prepared and optimized properties of high-Tc superconducting ceramics (HTSC),
• designed, built the hardware and programmed digital acquisition systems necessary to perform HTSC measurements,
• built internal statistical processing software for the data acquired;
• programmed and performed Monte Carlo studies on statistical models of vortices in mixed state of HTSC;
• published and presented research results in international peer reviewed journals and at conferences;
• information systems manager for my research department since 1991;
• network founder and network administrator of the Institute (RA12-RIPE), since 1995;

1989.09-1990.06: high-school professor of physics (8-12 grades), High-School of Bozovici, Caraș Severin, **Romania**

Published (complete list in annex):

- 4 online free software and open-access resources (2000-2018),
- 10 peer-reviewed articles in international scientific journals (1994-2003)
- 2 invited talks at international conferences (1995-2005)
- 18 communications at international conferences (1995-2005)
- 6 communications at national conferences (1992-1996)
- 13 peer-reviewed articles published in national scientific journals (1992-1998)

IT-related certifications (Brainbench - 2008)

Name	Score
XML Concepts	4.28 (>94%)
WWW Concepts	4.42 (>97%)
Web Development Concepts	3.69 (>83%)
RDBMS Concepts	3.51 (>83%)
Programming Concepts	3.95 (>85%)
C++ Fundamentals	3.36 (>61%)
C	3.59 (>91%)
Internet Concepts	4.21 (>95%)
Internet Technology Fundamentals	4.09 (>93%)
Unix Administration (General)	4.01 (>71%)
TCP/IP Administration	3.25 (>88%)

(>X% means a better score than X% of those tested previously)

Administered WindowsNT, FreeBSD, Linux (Debian);
Worked with .NET, MySQL, PHP, ASP, Apache, Lucene and Solr, IIS, gcc, sed, bash, flex, bison, TeX, etc. Programmed in assembler, C/C++/C#.
Used Microsoft Office, OpenOffice, and the equivalent packages before them, since 1988.

My ultimate goal is to create or participate in the creation of a (european/global) digital library of scientific works freely open to the public.

I worked at various levels in open-access infrastructure, digital libraries, semantic libraries, semantic authoring, semantic publishing, information retrieval, knowledge representation in public institutions (universities, research institutes, international organizations).

All of the above has a background of deep interest in physics and a keen attention on the practical role Internet can play in our society.

CV Annex - Romeo Anghelache - Published works

I. Online resources

- [FRS](#) - an open-source, full-text, search service, built on top of Lucene.NET (2007)
- [Hermes](#) - a semantic XML e-publishing tool for LaTeX authored scientific articles, open source software, specifications and documentation, R.Anghelache, 2004, <http://hermes.roua.org/>
- [Talkbank XML-Schema](#), open source vocabulary/ontology for psycholinguistic annotations, R. Anghelache, 2002, source: <http://www.talkbank.org/talkbank.xsd> , view: <http://romeo.roua.org/anxss/talkbank.html>
- [SquidNT](#) - the first open-source port of the UNIX Squid proxy/caching server to WindowsNT, <http://romeo.roua.org/squidnt/>

II. Peer reviewed articles published in international journals

- M. Kohlhase and R. Anghelache, Towards Collaborative Content Management and Version Control. Proceedings of the 2nd International Conference on Mathematical Knowledge Management, MKM 2003, Springer, LNCS 2594, 2003.
- N.Rezlescu, R.Anghelache, I.Ciobotaru and I.Puha, Some possible effects of periodic pinning in high T_c superconductors, Superlattices and Microstructures **21**(1997) p.431.
- N.Rezlescu, R. Anghelache, I. Ciubotariu, Monte Carlo study of a periodically pinned 2D superconductor, Acta Physica Polonica A **91** (1997) p.337.
- P.D.Popa, N.Rezlescu and R.Anghelache, Inductive sensor for slow variation of magnetic fields, Sensors and Actuators A **59** (1997) p.219.
- N.Rezlescu, R.Anghelache, P.D.Popa, I.Ciobotaru, Vortex melting transition and periodic pinning in high temperature superconductors, J. Magn. Magn. Mat. **157** (1996) p.673.
- N.Rezlescu, R.Anghelache, P.D.Popa and I.Ciobotaru, Discrete Monte Carlo simulations of vortex melting in HTSC with periodic pinning, Physics Letters A **205** (1995) p.97.
- N.Rezlescu, R.Anghelache and P.D.Popa, TGA study of the oxygen kinetics in Y123 materials, Balkan Physics Letters Supl **2** (1994) p.72 .

III. Communications presented at international conferences

- LateX, XSLT to XHTML+MathML, Invited lecture, R. Anghelache, 11 November, 2005, ICTP Trieste, Italy.
- Scientific Content on the Web, MathML, Hermes, Invited lecture, R. Anghelache, 10 November, 2005, ICTP Trieste, Italy.
- R. Anghelache, On Hermes, Workshop on Hermes and Semantic Authoring with TeX and MathML, Max Planck Institut for Gravitational Physics, 26-27 October, 2004, Golm-Berlin, Germany.
- R. Anghelache, Hermes - A semantic XML+MathML e-publishing tool of scientific articles authored in LaTeX, Anniversary session of the Romanian Academy, Institute of Computer Science of Romanian Academy, 24-25 sept. 2004, Iași, Romania.
- R.Anghelache, Hermes - a reliable conversion from TeX to MathML, New Developments in Electronic Publishing of Mathematics, at 4-th European Congress of Mathematics, Stockholm, Sweden, June 25 - 27, 2004.
- R. Anghelache and B.Schutz, Hermes: An Effective Converter from TeX into MathML, Enhancing the Searching of Mathematics, IMA "Hot Topics" Workshop, Institute for Mathematics and its Applications, University of Minnesota, U.S.A, April 26-27, 2004.
- R.Anghelache, Diachronic publishing and the Octopus document, IuK99 - Dynamic Documents, University of Jena, Jena, Germany, March 22-24 1999.
- N.Rezlescu, R.Anghelache and P.D.Popa, Periodicity of pinning and mixed state in rare-earth based high Tc superconductors, Fremantle, Western Australia, 25 - 30 October 1998.
- R.Anghelache, N.Rezlescu and P.D.Popa, Dynamic efficiency of ordered pinning for resistivity atenuation in high Tc superconductors, The 20th IUPAP International Conference on Statistical Physics (STATPHYS 20), Paris, France, July 20 - 24, 1998.
- N.Rezlescu, R.Anghelache, P.D.Popa and I.Puha, Vortex clustering and melting transition in periodically pinned high-Tc superconductors, 16th General Conference of the Condensed Matter Division, Leuven, August 25-28, 1997.
- N.Rezlescu, R.Anghelache, I.Ciubotariu, Monte Carlo study of a periodically pinned 2D superconductor, Idem.
- N.Rezlescu, R.Anghelache, I.Ciobotaru and I.Puha, Some possible effects of periodic pinning in high Tc superconductors, Idem.
- N.Rezlescu, R.Anghelache, P.D.Popa, I.Ciobotaru, Vortex melting transition and periodic pinning in high-temperature superconductors, Idem.

IV. Communications presented at national (romanian) conferences

- P.D.Popa, N.Rezlescu and R.Anghelache, Inductive sensor for the slow variation of magnetic fields, 1st European Magnetic Sensors and Actuators Conference, Iași, July 22-24, 1996.
- N.Rezlescu, R.Anghelache, P.D.Popa și C.Gh.Buzea, Influența tratamentului termic

asupra unor parametri caracteristici ai supraconductorilor Y123, Sesiunea de Comunicări "Materiale Magnetice și Supraconductoare '92", Cluj-Napoca, Septembrie 1992.

- N.Rezlescu, R.Anghelache, P.D.Popa și C.Gh.Buzea, Sistem de achiziție de date pentru laboratoarele de cercetare, Idem.
- N.Rezlescu, R.Anghelache and P.D.Popa, TGA study of the oxygen kinetics in Y123 materials, Idem.

V. Peer reviewed articles published in national (romanian) journals

- N.Rezlescu, R.Anghelache, P.D.Popa, About interdiffusion in the orthorhombic phase of the polycrystalline superconductors $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$, Rom. Rep. Phys. **48** (1996) 3-4.
- N.Rezlescu, P.D.Popa and R.Anghelache, About the thermal behaviour of the superconducting compound $\text{YBa}_2\text{Cu}_3\text{O}_{7-y}$ around the critical temperature, Rom.J.Phys. **40** (1995) p.347.
- N.Rezlescu, C.Buzea și R.Anghelache, Proprietățile supraconductorilor de înaltă temperatură critică din familiile La și Y, Memoriile secțiilor științifice ale Academiei **17** (1994) p.97.
- N.Rezlescu, C.Buzea și R.Anghelache, Proprietățile supraconductorilor ceramici din familiile Bi și Tl, Memoriile secțiilor științifice ale Academiei **17** (1994) p.131.
- N.Rezlescu, C.Buzea, C.Gh.Buzea, R.Anghelache and P.D.Popa, The mass anisotropy in high-temperature superconductors, Rom. J. Phys. **39** (1994) p.181.
- N.Rezlescu, R.Anghelache, P.D.Popa, Data acquisition system for the study of the high T_c superconductors, Analele Universității "Al.I.Cuza" Iași - fizică **40** (1994) p.121.
- N.Rezlescu, R.Anghelache and P.D.Popa, On the oxidation process in Y123 superconductors, Romanian Journal of Physics **38** (1993) p.941.
- N.Rezlescu, C.Buzea, C.Gh.Buzea, R.Anghelache și P.D.Popa, Materiale ceramice supra-conductoare cu înaltă temperatură de tranziție, Memoriile secțiilor științifice ale Academiei **16** (1993) p.15.
- N.Rezlescu, R.Anghelache, P.D.Popa and C.Gh.Buzea, The thermal treatment influence on some characteristic parameters of the Y123 superconductors, Studia Universitatis "Babeș-Bolyai" Cluj-physica **37** (1992) p.93.