

# CURRICULUM VITAE

**Name and surname:** TUDOR BARBU

**Birthplace:** Iași, ROMANIA

**Affiliation:** Institute of Computer Science of the Romanian Academy, Iași Branch

**Position:** Dr. Habil., Senior Researcher I, Compartment Coordinator, Scientific Council Board Member

## STUDIES AND DEGREES:

- **1988 – 1992:** High school studies at National College of Iași, Romania.
- **1992 – 1997:** Faculty of Computer Science of University *Al. I. Cuza* of Iași, finalized with a Bachelor degree in Computer Science.
- **1998 – 1999:** Master program in *Information Technology* at the University of Jyväskylä, Finland, finalized with a *EXIMIA CUM LAUDAE APROBATUR* Master of Science (MSc) degree.
- **2000 - 2005:** Doctoral program at Faculty of Automatic Control and Computers of University *Politehnica* of Bucharest, finalized with a *CUM LAUDAE* PhD degree in Computer Science on January 17, 2005.
- **2014 - 2015:** Habilitation in Computer Science at Romanian Academy, Bucharest, the Habilitated PHD degree being achieved in April 2015.

## PROFESSIONAL EXPERIENCE:

- **1997-2004:** Assistant Researcher at the Institute of Computer Science of the Romanian Academy, Iași
- **2004-2006:** Scientific Researcher at the same institute, coordinating a signal processing and analysis team
- **2006-2009:** Senior Researcher III, coordinator of the *Image and Video Processing and Analysis Compartment* of the institute
- **2009-2013:** Senior Researcher II, leader of the same research collective, member of the leading Scientific Council of Institute of Computer Science
- **2013 - present:** Senior Researcher I, research compartment coordinator and member of the board of the leading council
- **2015 - present:** PhD Coordinator, Member of the *School of Advanced Studies of the Romanian Academy* (SCOSAAR)

## ACADEMIC VISITS:

- **May 2012:** Academic Visitor at the Department of Automatic Control and Systems Engineering of the University of Sheffield, UK.
- **April 2013:** Visiting Professor at the Department of Mathematics of the Bologna University, Italy.

- **August – September 2014:** Senior Researcher at the Department of Mathematics of the University of Bielefeld, Germany, with a post-doc DAAD fellowship.
- **June - July 2015:** Associate Professor at the Department of Mathematics of the Bologna University, Italy.
- **August 2016:** Visiting Academic at the Department of Scientific Computing of the Florida State University, Florida, United States of America.
- **August – September 2016:** Visiting Professor at the Department of Mathematics of the Pittsburgh University, Pennsylvania, United States of America.
- **August – September 2017:** Visiting Professor at the Faculty of Science, University of Monastir, Tunisia, 2017.
- **2014-2018:** Invited Professor, for graduate courses, at Faculty of Medical Bioengineering, “Grigore T. Popa” University of Medicine and Pharmacy of Iași, Romania.

**RESEARCH ACTIVITY RESULTS:** disseminated in almost 200 authored research works

- **Books and chapters:** 4 books and 5 book chapters, with recognized publishers
- **Articles published in recognized international journals:** 67 articles published in ISI journals with impact factor and journals indexed by major international databases
- **Articles published in volumes of recognized international scientific events:** 63 articles published in volumes of international conferences, symposiums and workshops
- **Scientific reports:** 32 research reports elaborated at institute, as compartment coordinator, and 12 scientific reports related to contract-based project
- **Plenary Talks:** over 20 keynote addresses at international scientific events and talks at several top universities
- **4 Theses:** Graduation, Master, PhD and Habilitation theses
- **An edited Special Issue of a high impact factor journal**
- **Impact of the results:** over 800 citations of the published works, according to Google-Academic
- **Hirsch index:** H-index = 15.

**RESEARCH-DEVELOPMENT PROJECTS BASED ON CONTRACT:**

- **01.10.2017-30.09.2020:** *Analysis and Control of Schrodinger Stochastic Equations and Nonlinear Diffusion Models*; Code PN-III-P4-ID-PCE2016-0011; **Dr. Habil. Tudor Barbu – Senior Researcher.**
- **01.10.2015 - 30.09.2017:** Project ARHIMEDES – *Hybrid Image Restoration Algorithms based on Diffusion and Stochastic Equation Models*; Code: PN-II-RU-TE-2014-4-0083; Contract Number: 126/01.10.2015; Contractor: Romanian Academy, Iasi Branch; 24 months; **Director: Dr. Habil. Tudor Barbu.**
- **June – July 2015:** Grant NADIR - *Nonlinear Anisotropic Diffusion Image Restoration*, GNAMPA / InDAM Project conducted at the Department of Mathematics of the Bologna University, Italy; **Coordinator – Dr. Habil. Tudor Barbu.**
- **2015:** Interdisciplinary Project 4 of Romanian Academy– *Siguranța Informatică, Protecția Cibernetică, Protecția proprietății intelectuale în proiecte și publicarea electronică,*

Development strategy of Romania for the next 20 years; Dr. Habil. Tudor Barbu – Senior Researcher I.

- **Aug. - Sept. 2014:** Project VANDIRES – *Variational and Anisotropic Diffusion based Image Restoration System*, conducted at the Department of Mathematics of the Bielefeld University, Germany, as part of a DAAD scholarship for university professors and senior researchers; Coordinator – Dr. Tudor Barbu.
- **2011 - 2015:** Project PN-II-ID-PCE-2011-3-0027 - *Analysis and control of deterministic and stochastic diffusion equations*, Director - Prof. V. Barbu, Institute of Mathematics of the Romanian Academy, Octav Mayer, Iași; Dr. Tudor Barbu – Senior Researcher I.
- **2008 - 2011:** Project IDEI, CNCSIS Code 70/2008, *Ecuatii neliniare de difuzie în teoria mediilor poroase, biometrie și restaurarea imaginilor*, Director - Prof. Gabriela Marinoschi, Institute of Mathematical Statistics and Applied Mathematics of the Romanian Academy, Bucharest; Dr. Tudor Barbu – Experienced Researcher.
- **2008 - 2011:** *ADBIOSONAR - Adaptive Bio-mimetic Sonar Heads for Autonomous Vehicles*, Program 4, 2007-2013, Code 1286, Contract number 12079/2008, Director – Prof. Dorel Aiordachioaiei, *Dunărea de Jos* University of Galați; ICS Supervisor – Prof. H. N. Teodorescu; Video processing and analysis section coordinator – Dr. Tudor Barbu.
- **2006 - 2009:** *PERSIDENT: Informatic biometric system for person identification and access authorizing*, CNCSIS Code 835/2006, Director - Prof. Hariton Costin, University of Medicine and Pharmacy; Dr. Tudor Barbu – voice recognition section coordinator.

#### **AWARDS FOR SCIENTIFIC ACTIVITY:**

- **Romanian Academy Prize “GHEORGHE CARTIANU”** in *Information Technology and Science*, awarded on December 18, 2008, for the book entitled *Modelling Multimedia Information Systems*, published by Romanian Academy Publishing House in 2006
- **Best Paper Award** at *20<sup>th</sup> International Conference on System Theory, Control and Computing, ICSTCC 2016*, Sinaia, Romania, October 13-15, 2016, IEEE
- **Best Paper Award** at *ICDIP 2016 : 18<sup>th</sup> International Conference on Digital Image Processing*, Amsterdam, Netherlands, August 4-5, 2016
- **Best Paper Award** at *World Congress on Electrical Engineering and Computer Systems and Science, EECSS '15*, Barcelona, Spain, 13-14 July 2015
- **Award for obtaining the habilitation certificate:** PN-II-RU-ABIL-2015-2-0054, 2015 (<https://uefiscdi.ro>)
- **1 Award for Research Results in 2018:** PN-III-P1-1.1PRECISI-2018-26145
- **2 Awards for Research Results in 2017:** PN-III-P1-1.1PRECISI-201716480; PN-III-P1-1.1PRECISI-201714266 (<https://uefiscdi.ro>)
- **Rewarding research results 2016:** Code PN-II-RU-PRECISI-2015-9-8817
- **Rewarding research results 2013:** Code PN-II-RU-PRECISI-2013-7-4176
- **CNCSIS Prize for research results of 2008,** Code 789
- **CNCSIS Prize for research results of 2007,** Code 119

## **OTHER INFORMATION:**

- Member of the *Comission for Informatics of the National Council for Titles, Diplomas and Certificates (CNATDCU)*
- Member of the *Romanian Society for Industrial and Applied Mathematics (ROMAI)*
- **Editorial activity:**
  - Member of the Editorial Board of the *ROMAI journal*, indexed BDI
  - Member of the Editorial Board of *Journal of Image Processing Theory and Applications*, indexed BDI
  - Lead Guest Editor of *Advances in Variational and Partial Differential Equation-Based Models for Image Processing and Computer Vision*, Special Issue of *Mathematical Problems in Engineering*, Hindawi, IF = 1.145, April 2018.
  - Lead Guest Editor of *Advanced Image Processing and Analysis Solutions using PDE-based Modeling of the Physics Phenomena*, Special Issue of *Advances in Mathematical Physics*, Hindawi, IF = 0.710, 2019.
- **Conference roles:**
  - Member of organizing, scientific and technical committees of recognized international conferences: *ICSTCC 2014, IIVA 2016, CAIM '17, EHB 2017, CAIM '18, ISCBI 2018, DGDS 2019, CAIM 2019, EHB 2019* and others.
  - Vice-President of the Organizing Committee of *25th Conference on Applied and Industrial Mathematics - CAIM 2017, Iasi, Romania, 14-17 sept. 2017*
  - Invited Keynote Plenary Speaker at 10 international conferences
  - Chairman of session at numerous national and international scientific events
- Programming languages: MATLAB, C/C++, Java
- Foreign languages: English – high level, French – lower level.

## **MAJOR RESEARCH AREAS:**

- Digital media (audio, image and video) signal processing and analysis
- Pattern recognition
- Multimedia information organizing, indexing and retrieval
- Biometrics: person recognition based on voice, face, fingerprint and iris
- Machine learning
- Computer vision
- Partial differential equations (PDEs) applied in image processing and computer vision.
- Scientific computing

## **RESEARCH PROFILES:**

- **Research Gate:** [https://www.researchgate.net/profile/Tudor\\_Barbu](https://www.researchgate.net/profile/Tudor_Barbu)
- **Google-Academic:** <https://scholar.google.ro/citations?user=FWpmDEgAAAAJ&hl=ro>
- **ORCID:** <http://orcid.org/0000-0002-9919-7776>
- **ResearcherID:** <http://www.researcherid.com/rid/G-3523-2016>
- **Scopus:** <https://www.scopus.com/authid/detail.uri?authorId=55969625500>