

The Republic of Moldova, Research and Development in Information and Communication Technologies



GEOGRAPHICAL LOCATION: Central-Eastern Europe

AREA: 33,843.5 km²

POPULATION: 3.63 million people

CAPITAL: Chisinau

BORDERING COUNTRIES/REGIONS: Romania / Ukraine

Research and Development (R&D) in the Republic of Moldova is mainly carried out by research organizations and universities. Actually the R&D activity in Moldova is regulated by the Law – Code on Science and Innovations, adopted by the Parliament of the Republic of Moldova in 2004.

The encouragement of the scientific research and stimulation of a long standing innovational climate were acknowledged under the law as main priorities for the social and economic development of the Republic of Moldova.

Recognizing the priority of the development of fundamental research, a worthy source in order to get new knowledge, the activity of the science and innovation organizations is guided towards the conversion of the scientific research results into new tools and technologies, in order to be subsequently used by the national economy of the country.

One of the main directions of R&D organizations is to eliminate the state of isolation of the Moldovan scholars from the world science. The Republic of Moldova's participation in the establishment of a common European scientific space has contributed to the stabilization of the country scientific potential, as well as to the deepening of the mutual exchange with the scientific community of the EU.

MAIN ICT R&D INSTITUTIONS:



ACADEMY OF SCIENCES OF MOLDOVA (WWW.ASM.MD)



INSTITUTE OF MATHEMATICS AND COMPUTER SCIENCE (WWW.MATH.MD)

- Laboratory of Programming Systems
- Laboratory of Informational Systems

Main achievements:

- Development of decision support systems for critical, information-bound domains
- Development of intellectualization interfaces methods for symbolic computation systems



INFORMATION SOCIETY DEVELOPMENT INSTITUTE (WWW.IDSI.MD)

- Laboratory of Research and Development of Information Society
- Laboratory of Information and Communication Technologies

Main achievements:

- Development of adaptive and intuitive systems for learning and learning appliances for teachers and students
- Development of information systems that acquire, analyse and categorise extremely large, rapidly evolving and potentially conflicting and incomplete amounts of information



TECHNICAL UNIVERSITY OF MOLDOVA (WWW.UTM.MD)

- Department of Computers, Informatics and Microelectronics
- Department of Radio electronics and Telecommunications

Main achievements:

- Development of tools that involve modelling, simulation and visualisation techniques
- Development of algorithms and software products for verification, validation and animated simulation of complex control systems



STATE UNIVERSITY OF MOLDOVA (WWW.USM.MD)

- Department of Mathematics and Computer Science

Main achievements:

- Development of shell model for rapidly building systems based on previous events that have no precedent
- Development of open, scalable, dependable service platforms, architectures, and specific platform components.



ACADEMY OF ECONOMIC STUDIES OF MOLDOVA (WWW.ASE.MD)

- Faculty of Economic Cybernetics, Statistics and Informatics
- Department of Informatics

Main achievements:

- Methodological and economic aspects of Development of Information Society
- Electronic business and information security research aspects

ICT PRIORITIES¹:



- Digital Libraries and digital preservation (Objective 4.1)
- Focus on learning in 21st century; the new links between individual and organisational learning, and creativity; adaptive and intuitive systems for learning; knowledge management (Objective 4.2)
- Intelligent Information Management (Objective 4.3)
- Focus on multi-core and polymorphic system architectures; new systems software, programming paradigms; Engineering of large distributed systems (Objective 3.6)
- Nanoelectronics Technology (Objective 3.1)
- ICT for Patient Safety: safer surgery, integration of clinical research and clinical care, early detection of public health events (Objective 5.2)

COOPERATION:



COLLABORATIVE PROJECTS IN THE 7TH FRAMEWORK PROGRAMME:

- „Distributed Optical Gateway from Eastern Europe to GEANT (POS)” (RENAM Association)
- „SEE-GRID infrastructure for regional eScience” (RENAM Association)

PROJECTS WITH THE SCIENCE AND TECHNOLOGY CENTRE IN UKRAINE (STCU):

- „Computer monitoring technology for operational state and accidental risk of poison-fluid and petroleum depots” (Institute of Mathematics and Computer Science)
- „Creation of unique information environment in GUAM community for remote training and technical and scientific cooperation” (Information Society Development Institute)
- „Power and efficiency of natural computing: neural-like P (membrane) systems” (Institute of Mathematics and Computer Science)

BILATERAL PROJECTS:

- Academy of Science of Moldova & Belarusian Republican Foundation for Fundamental Research
 - „Analysis of priority queueing models in modern systems of information resources diversification” (Institute of Mathematics and Computer Science)
- Academy of Science of Moldova & Russian Foundation for Basic Research
 - „New algorithms for authentication of electronic information and cryptographic schemes with secret sharing” (Institute of Mathematics and Computer Science)
 - „Analytical, symbolic and numerical procedures for hard perturbed dynamical systems, problems of mathematical modelling and optimal control” (State University of Moldova)
- Academy of Sciences of Moldova & Federal Ministry of Education and Research (BMBF) of Germany
 - „Orientation and stabilization methods and procedures for capturing images at distance associated with coding, compression, protection and real-time transmission” (Technical University of Moldova)

¹ National ICT Priorities are based on the ICT objectives of the 7th Framework Programme for Research and Technological Development of the European Union