

Science Life

MEMBERS OF THE LATVIAN ACADEMY OF SCIENCES ELECTED ON NOVEMBER 27, 1998

On November 24, 1998 the General Meeting of the Latvian Academy of Sciences (LAS) elected altogether 33 members to the Academy. 19 new members were elected to the LAS Division of Social Sciences and the Humanities: Valdis Bērziņš (full member, history), Ludmila Azarova-Vāciete (honorary member, literature), Raisa Deņisova (honorary member, anthropology), Zigmunds Skujiņš (honorary member, literature), Māra Zālīte (honorary member, literature), Jānis Bērziņš (corresponding member, history), Pārsla Eglīte (corresponding member, demographic science), Tālavš Jundzis (corresponding member, political sciences), Pēteris Laķis (corresponding member, philosophy), Dace Markus (corresponding member, linguistics), Ieva Ose (corresponding member, archaeology), Aivars Stranga (corresponding member, history), Inna Šteinbuka (corresponding member, economics), Tālis Tisenkopfs (corresponding member, sociology), Andreas Ādahl (foreign member, political sciences), Rolfs Ekmanis (foreign member, literary criticism), Jānis Krēsliņš (foreign member, history), Indriķis Šterns (foreign member, history), Ēvalds Tinisons (foreign member, archaeology).

The Division of Physical and Technical Sciences

MĀRCIS AUZIŅŠ (full member, physics)

Born in 1956. Dr. habil phys. (1995). Professor at the University of Latvia (UL). Director of the Institute of Atomic Physics and Spectroscopy and Head of the Department of Experimental Physics. Chairman of the Senate and Deputy Chairman of the Habilitation and Promotion Council (in physics) at the UL. Member of the American Physics Society and member of the Board of Latvian Physics Society.

His scientific interests are related to atomic and molecular physics, laser spectroscopy, optics; quantum interference and use of visual interpretation in quantum mechanics.

Current research activities: theoretical and experimental studies of small molecules, including laser spectroscopy, angular momentum polarisation, external field effects, collisions, intermolecular interaction and perturbations.

Director and coordinator of several research projects.

Has published 64 scientific articles, 46 abstracts to scientific conferences, and a monograph (jointly with R. Ferber) "Optical Polarization of Molecules" (Cambridge University Press, 1995).

Alexander Von Humboldt Foundation Prize (1992).

JĀNIS OSIS (honorary member, information sciences)

Born in 1929. Graduated from the UL Faculty of Mechanics (1953). Degree of Doctor of Sciences in 1972 (thesis "Diagnostics of Complex Systems"). Dr. habil. sc. ing. Professor.

Since 1990, his main research topic is "Topological modeling and object-oriented system analysis".

Since 1958, he has been teaching at the Rīga Technical University. Formerly Dean of the RTU Faculty of Automatics and Computer Science (1962–1965) and Head of the Department of the Faculty of Automatics and Computer Science (1983–1994).

Professor Osis has supervised 8 doctoral thesis. Currently, supervisor of 9 doctoral thesis.

Has published about 160 scientific papers, including 7 monographs.

EUGENE IOLIN (corresponding member, physics)

Born in 1937. Dr. habil phys. (1978). Corresponding member of the LAS. Head of the Laboratory of the LAS Institute of Physical Energetics.

Main direction of research: theory of condensed medium.

Member of the Scientific Council of the LAS, Institute of Physics. Member of the Expert Commission of the Latvian Council of Science.

Closely collaborates with the respective research centers in Germany and France.

Has published 130 scientific papers.

ANDRIS OZOLS (corresponding member, physics)

Born in 1944. Dr. habil phys. (1991). Professor at the UL and the Rīga Technical University (RTU). Leading researcher of the UL Institute of Solid State Physics. Member of the Habilitation and Promotion Councils at the UL and RTU. Member of the International Society of Optical Engineering.

His scientific interests are related to research of holographic processes in photosensitive materials.

Has published 105 scientific papers, including a monograph (jointly with K. Švarcs) "Holography – Revolution in Optics" (1975).

JĀNIS GRUNDSPENĶIS (corresponding member, information sciences)

Born in 1942. Dr. habil. sc. ing. (1992). Professor at the Rīga Technical University. Head of the RTU Department of Systems Theory and Design, Dean of the Faculty of Computer Science and Computer Engineering, and Director of the Institute of Applied Computer Systems at the RTU.

His scientific interests are related to synthesis and analysis of models of complex technical systems, intellectual systems and instruments for developing structure of complex systems, automation of knowledge base development.

President of the Latvian National Organisation of Automatics. Member of the Expert Commission (in information science) of the Latvian Council of Science. Chairman of Habilitation Council H-07 and member of the RTU Senate. Chairman of the Council of RTU Faculty of Computer Science and Computer Engineering. Associate member of several international organisations.

Has published 105 scientific papers, 13 study aids (student books), and 8 lecture abstracts in the form of Word 6.0 files.

IGORS KABAŠKINS (corresponding member, information sciences)

Born in 1954. Dr. habil. sc. ing. (1992). Vice-Rector for Research and Academic Affairs of the Rīga Aviation University (RAU). Professor and Director of the RAU Institute of Telematics and Logistics.

His scientific interests are related to information technology applications, electronics and telecommunication, analysis and modelling of complex systems.

Member of several international organisations: International Telecommunication Academy, International Academy of Ecology and Life Protection Sciences, New York Academy of Science, etc. Co-editor of the "Journal of Air Transportation World Wide" (published by the University of Nebraska, USA).

Merited Inventor in Latvia (1989).

Has published 227 works, including 21 student books. Author of 67 inventions and patents.

GILLES BRASSARD (foreign member, information sciences)

Born in 1955. Professor at the Université de Montréal. Member of the Royal Society of Canada. Professor Brassard ranks among the top researchers in cryptology (science of cryptography and data safeguard) and has international recognition.

He was admitted as a student in the Université de Montréal at an early age of 13. At the age of 33 he became one of the youngest Professors ever promoted to this rank in the history of the University.

His most relevant contribution to fundamental research is in the fields of cryptography, quantum cryptography and quantum computing. Particular publicity was given to Professor Brassard's and colleagues' discovery of **Quantum teleportation**, which was heralded by the magazine "Discover" as one of the world 50 top science stories of 1993.

Professor Brassard's book "Modern Cryptology" was initially published by Springer-Verlag and later was translated into Chinese, Italian, French and Russian.

YURI URZHUMTSEV (foreign member, engineering)

Born in 1929. Doctor of Sciences in mechanics. Professor. Corresponding member of the LAS (1973). Till 1979 he was Head of Laboratory and Assistant Director of the Institute of Polymer Mechanics of the LAS. Formerly Director of the Northern Institute of Physico-Chemical Problems of the Yakut Division, the Siberian Branch of the Russian Academy of Sciences (RAS). In 1997, Professor Urzhumtsev was elected Chairman of the Yakut Scientific Centre of the Siberian Branch. Corresponding member of the RAS (1981). Full member of the Yakut (Sakh) Academy of Sciences (1993). LAS Fridrihs Candere Prize Laureate (1976).

Professor Urzhumtsev has studied the effects of the environment on the strength of composite materials; developed a theory of predicting long-term strength of polymers and polymer-composites, and defined the principles of analogy of oscillation-time with stress-time indices. Since working in Yakutsk, he has not broken contacts with the LAS and Latvian research, and carries out joint research with the Institute of Polymer Mechanics.

Has published over 150 scientific papers, including 6 monographs.

The Division of Chemical, Biological and Medical Sciences

EDVARDS LIEPIŅŠ (full member, chemistry)

Born in 1944. Dr. habil. chem. (1988). Corresponding member of the LAS (1995). Leading researcher of the Latvian Institute of Organic Synthesis. Presently lecturer at the Royal Institute of Sweden in Stockholm.

Main directions of research: investigation of chemical reactivity of organic and elementorganic compounds by nuclear magnetic resonance (NMR); NMR spectroscopy of hypervalent organic compounds of silicon and germanium; NMR determination of DNA and protein structures, investigation of their dynamic and solvation properties.