Global Challenges of the 21ˢᵗ Century
1) Technological development and human health/ quality of life
2) Climate change and environmental sustainability
3) Democracy and cohesion in Europe

Can We Do Research without Mathematics ?

One cannot have critical thinking in knowledge and research without logic! This is the first argument for using mathematical logic, which gives one the possibility of solid statements. The flexibility in research is given by the change of premises (axioms) and not by ambiguous affirmations. We will briefly present some applications of mathematics in physics, biology, linguistic and social sciences.

Vasile Brinzanescu (IMAR) obtained his PhD from the University of Bucharest, Romania, in 1978. He then became Associate Professor at the University Politechnica Bucharest and, since 1992, he became full Professor at the "Simion Stoilow" Institute of Mathematics of the Romanian Academy. From 1994 to 2004 he was the deputy director of IMAR and from 2004 to 2012 he was the director of IMAR. From 2012 he has been the head of the research group Algebraic Geometry of the IMAR. He received the Alexander von Humboldt grant for 2 years. He was visiting professor at IHES in 1998, at Max-Planck-Institute Bonn (totally more than 3 years between 1994-2016), at the University of Gottingen in 1992, at the University of Pennsylvania, Philadelphia, in 2012, at the University of Kaiserslautern in 1999 and 2005. He authored the monograph "Holomorphic vector bundles over compact complex surfaces", Springer Verlag 1996, LNM 1624, and he is the author of 62 articles in peer-reviewed journals. His current scientific interests are the study of moduli spaces in complex algebraic geometry with applications in Hamiltonian systems and physics (string theory). Some of his papers are published in highly ranked journals as Commun. Math. Phys., Crelle J., Math. Ann., etc.