

## Chronis Kynigos

Chronis Kynigos is Professor of Educational Technology and Mathematics Education, Director of the Educational Technology Lab <http://etl.ppp.uoa.gr> at the Dept. of Education, Faculty of Philosophy, Education and Psychology, School of Philosophy, National Kapodistrian University of Athens (NKuA). This institution was ranked n. 292 out of the top 1000 Universities in the world by U.S. News & World Report in 2015.

He gives courses in Educational Technology and Mathematics Education at undergraduate and postgraduate level. He served as Director of a Masters' Course in the 'Didactics of Specialized Subjects with Digital Technologies' and as member of the B.o.D. of two more, titled 'Theory, Practice and Evaluation in Education, and 'Methodology and Didactics of Mathematics', an inter-university course with the University of Cyprus based at the Dept. of Mathematics at NKuA. He has been the head supervisor in 14 completed PhD theses so far.

His academic pursuits involve 22 years of contributions in National and EC-based competitive contexts regarding the design of innovative digital media and added-value pedagogical methods for their use in research involving aspects of a) designing and generating socio-constructionist learning environments in the classroom b) design and implementation of innovative teacher education methods involving socio-technical professional Communities of Practice and diverse Communities of Interest and c) design, coordination and implementation of large-scale initiatives providing impact via the infusion of pedagogical innovations in the educational system. His research interests include: individual and collaborative student learning processes with such media; classroom practices; teachers' practices and professional development process with particular emphasis on teachers' resource and digital artifact design; techniques and processes for integrating research approaches to the development and use of digital media for added-value educational practices. He has been cited for his work on students' meaning making with mathematical formalism, on the value of half-baked (fallible) designs for constructionist student activity including 'black and white' architectures for expressive media and on ways of integrating theoretical frameworks and addressing the role of context in design research.

He has taken part in more than ten EC – funded projects acting as PI - coordinator in three, spanning FP5, 6, 7 and Horizon2020 frameworks. Recent examples are the H2020 Sf&wS, 'ER4STEM' project in Educational Robotics (<http://er4stem.acin.tuwien.ac.at>) , the FP7 DG-Connect 'M C Squared' project in Mathematical creativity (<http://www.mc2-project.eu>) and the FP6 IST 'ReMath' project in Integrated approaches to Mathematical Representations (<http://remath.cti.gr>). He was a founding member of the 'Kaleidoscope' - NoE, # 507838, 'TEL' - 'Technology-enhanced Learning and Access to Cultural Heritage', FP6-2002-IST Action line.3.1.12 (2004- 2007).

He has so far been engaged in the co-design and development of three exploratory digital systems: a) E-slate, a component-oriented programmable authoring system for exploratory software, b) MachineLab, a web-based, programmable 3D simulator and c) Cruislet, a programmable GIS system for navigational mathematics ([http://etl.ppp.uoa.gr/content/download/index\\_download\\_en.htm](http://etl.ppp.uoa.gr/content/download/index_download_en.htm)). He has also contributed to the design of 11 serious collaborative games involving robotics and kinesthetic control of digital media in an E.T.L. spinoff company, a technological park called 'Polymechanon' which operated in the years 2009-2011 (<http://www.youtube.com/watch?v=d8AJwADKd90>).

With respect to large-scale impact initiatives, he was a founding member of 'Odysseia', Greek Ministry of Education, (1996-2000), impacting 10% of Greek schools by employing educational institutions and private sector SMEs to equip schools with infrastructure, design and develop resources and artefacts, train teacher educators and deploy TPD courses in schools. Since then, he is a member of the council for the Ministry's CTI-Diophantus long-term teacher education initiative (2003-2015) to employ digital media in teaching. He is responsible for coordinating the

training of 98 teacher educators in Mathematics, <http://etl.ppp.uoa.gr/pake/pake.htm>, who have hitherto serviced 25% of teachers nationwide (1300/7000 mathematics teachers), <http://b-epipedo2.cti.gr/>. He is also the coordinator for the domain of Mathematics in Primary and Secondary Compulsory Education of the Large Scale 'Digital School' CTI-Diophantus / Ministry of Education project. He supervised the production of the Interactive Curriculum Books for mathematics involving the design and development of around 1800 digital artefacts for years 3-11, (<http://ebooks.edu.gr>) which were complemented with more artefacts to comprise the Photodendro' portal for mathematical digital resources (<http://dschool.edu.gr>), in 2010-2015.

He is the author of an academic book titled 'The Investigations course: classroom uses of digital media for mathematics education' (in Greek) and has published around 65 articles in refereed journals (e.g. Educational Studies in Mathematics, ZDM, IJCMML) and research books ((Springer, Sense) and over 150 in refereed conference proceedings. He organized the 'Constructionism 2012' international conference and another two national conferences in 2004 and 5 respectively. He has co-organized an ICMI -11TSG in 2008, and a CERME WG in 2009. He is a member of the editorial board of the International Journals 'Computers in Mathematical Learning', 'Digital Experiences in Mathematics Education' and a founder of the Greek Association for Research in Mathematics Education. He has co-edited special issues in 'Educational Studies in Mathematics' in 2014 and 'Constructivist Foundations' in 2015. He has been invited to give a regular lecture at ICMI-12 in 2012 and plenary lectures in the 'Constructivism' 2014 conference. According to Google Scholar, in November 2015, his work has been cited 955 times (603 in the past 5 years) yielding an h-index of 18 (13 in the past 5 years) and an i-index of 29 (18 in the past 5 years).