

1. PERSONAL INFORMATION

Name: Aristotelis Gkiolmas
Date of birth: 5 September, 1969
Marital status: Married, with three children

Residential address: Ermou 3, Vyronas, 16233, Athens
Telephone numbers: +30-210-7659209, +30-6945-2579764
Email address: agkiolm@primedu.uoa.gr
Website: <http://uoa.academia.edu/AristotelisGkiolmas>
<https://scholar.google.com/citations?hl=en&user=fhJHNhcAAAAJ>

2. EDUCATION

2.1. Doctoral Studies (June 2006 - July 2013) – funded by the State Scholarship Foundation (IKY)
Department of Pedagogy and Primary Education (ΠΤΔΕ), National and Kapodistrian University of Athens (ΕΚΠΑ)
Dissertation title: *New Technologies in Science Education. Teaching Complexity in Ecosystems*
(Supervisor: Professor C. Skordoulis)

2.2. Master's Degree in Physical Sciences in Education (September 2004 - June 2006)
Department of Pedagogy and Primary Education (ΠΤΔΕ), National and Kapodistrian University of Athens (ΕΚΠΑ)
Postgraduate thesis title: *Environmental and Social Justice Issues in Education*

2.3. Master's Degree in Medical Physics (September 1993 - September 1995)
School of Health Sciences, Faculty of Medicine, Department of Medical Physics, University of Patras
Postgraduate thesis title: *A model for the oxygenation of cancerous tumours*. (Supervisors: Professor George Nikiforidis and Professor George Dassios)

2.4. Degree in Physics (September 1987 - December 1992)
Department of Physics, University of Athens. Grade: 8.29/10

3. PERSONAL AND PROFESSIONAL DEVELOPMENT

3.1. Languages

- English - C2
Certificate of Proficiency in English. Grade: B
- French - C2
T.F.L.F. Université de Liège, level C2. Also State Certificate of Language Proficiency, level C1
- German - B2
ÖSD Zertifikat, level B2

3.2. Computer Skills

- ICT certification level 1 (10 July 2013)
- ICT certification level 2 (8 June 2015)
- NetLogo programming language
- knowledge of Scratch

4. PROFESSIONAL CAREER

4.1. 20 July 2022

Assistant Professor at the School of Primary Education, Aristotle University of Thessaloniki

Subject: The Didactics of Physics

4.1.1. 7 February 2023

Tenured Assistant Professor at the School of Primary Education, Aristotle University of Thessaloniki

Subject: The Didactics of Physics

Government Gazette of Appointment: 226 / Issue C / 31-01-2023

4.2. 27 November, 2017 - present

Member of the Laboratory Teaching Staff (ΕΔΙΠ)

Department of Pedagogy and Primary Education, National & Kapodistrian University of Athens

(Transition by Government Gazette of Appointment: 3-11-2017 / Sheet number 1091 / Issue C / pp. 7893-7896).

Subject: Natural and Environmental Sciences in Education

(Determination of Cognitive Object: Government Gazette: 27-08-2018 / Sheet number 3643 / Issue B / p. 45747)

4.3. September 2001 - 27 November 2017

Physicist (ΠΕ04-01) in Secondary Education

- September 2016 - November 2017: First Experimental Gymnasium of Athens
- 2013 - 2016: Vyronas Fourth Gymnasium – Directorate of Secondary Education A' Athens
Responsible for the Laboratory of Physical Sciences and the Environmental Team
- 2011 - 2013: Vyronas Fifth Gymnasium – Directorate of Secondary Education A' Athens
Responsible for the Laboratory of Physical Sciences and the Environmental Team
- 2010 - 2011: Vyronas Third Gymnasium – Directorate of Secondary Education A' Athens
- 2004 - 2010: General Lyceum of Kallipoli. Directorate of Secondary Education A' Piraeus
- 2001 - 2004: Erateini Gymnasium. Directorate of Secondary Education, District of Fokida

4.4. 1993 - 2001

Physicist in private tutoring school

5. FURTHER ACADEMIC PURSUITS

5.1. Participation in Scientific Organisations

- Member of the Association for Education in Natural Sciences and Technology (ΕΝΕΦΕΤ)
- Member of the Hellenic Scientific Society for Environmental Education for Sustainability (ΕΛΕΕΤΠΕΑ)
- Member of Groupe International de Recherche sur l'Enseignement de la Physique (GIREP) and head of the Special Thematic Group "Science and Society"

5.2. Reviewer for International Scientific Journals and International Conferences

- Journal reviewer for *Green Theory and Praxis Journal*
<http://greentheoryandpraxisjournal.org/editorial-team/>
- Journal reviewer for *Environmental Education Research* (EER)
<http://www.tandfonline.com/doi/full/10.1080/13504622.2016.1226312>
- Paper reviewer for the International Conference of the Learning Sciences (ICLS)
- Paper reviewer for the International Conference of Computer-Supported Collaborative Learning (CSCL). Website: <https://www.isls.org/conferences>

5.3. Participation in Committees of the Institute of Education Policy

- Member of the three-member committee for the restructuring of Physics teaching material for Gymnasium and Lyceum, established by the Institute of Education Policy (IEP) in the summer of 2016
- Member of the IEP working groups for the preparation of a new curriculum and corresponding educational material. Subject: Natural Sciences for the 2nd grade of the General Lyceum (Spring 2018)

5.4. Participation in Conference Organising Committees

- Member of the organising committee for the 4th Panhellenic Conference "Didactics of Physical Sciences and New Technologies in Education". November 2004, Athens.
- Member of the organising committee for the Seminar "Sciences and Social Justice". KNE/EIE, Ermoupoli, 28 June 2005.
- Member of the organising committee for the 3rd Panhellenic Conference "The Contribution of the History and Philosophy of Physical Sciences to the Teaching of Natural Sciences". Athens, 19-25 September 2005.
- Member of the organising committee for the 7th ΚΕΕΠΕΚ Conference "Natural Sciences in the Pedagogical Departments of Primary Education". Athens, May 2007.
- Member of the organising committee for the 4th Panhellenic Conference "Science Issues: History, Philosophy and Didactics". Athens, 28-30 September 2007.
- Member of the organising committee for the 4th Workshop "Critical Approaches to Science and Education". Elati, Trikala, 12-16 July 2007.
- Member of the organising committee for the 5th "Critical Approaches to Science and Education". Elati, Trikala, 14-20 July 2008.
- Member of the organising committee for the 6th Workshop "Critical Approaches to Science and Education". Elati, Trikala, 14-18 July 2009.
- Member of the organising committee for the Panhellenic Conference "History, Philosophy and Teaching of Sciences". Athens, 5-9 May 2010.
- Member of the organising committee for the 12th Panhellenic Conference "Didactics of Physical Sciences and New Technologies in Education". ΠΤΔΕ, ΕΚΠΑ, Athens, 19-21 November 2021.
- Member of the organising committee for the 7th Workshop "Critical Approaches to Science and Education". Elati, Trikala, 12-14 July 2010.
- Member of the organising committee for the 7th Panhellenic Conference "The Contribution of the History and Philosophy of Sciences to the Teaching of Natural Sciences". Athens, 1-3 November 2012.
- Member of the Organising and Coordinating Committee for the 6th Panhellenic Conference "Integration and Use of ICT in Education". ΕΚΠΑ, Marasleio Elementary School, 18-20 October 2019.

5.5. Member of Conference Scientific Committees

- Member of the Scientific Committee for the 8th Panhellenic Union of Teachers (ΠΕΕΚΠΕ) Conference "Environmental Education aiming at Sustainability in the era of climate change". 11-13 September 2020, Patras.
- Member of the Scientific Committee for the GIREP International Conference. Budapest, Hungary, 1-5 July 2019.
- Member of the Scientific Committee for the 6th Panhellenic Conference "Integration and Use of ICT in Education". ΕΚΠΑ, Marasleio Elementary School, 18-20 October 2019.
- 11th Panhellenic Conference on the Didactics of Natural Sciences and New Technologies in Education. University of Western Macedonia, Department of Primary Education, Florina, 19-21 April 2019.

- 12th Panhellenic Conference on Didactics of Natural Sciences and New Technologies in Education. ΠΤΔΕ, ΕΚΠΑ, Athens, 19-21 November 2021.
- Computer Supported Collaborative Learning (CSCL) Conferences, USA. Member of the scientific committee from 2014 onwards.
- International Conferences of the Learning Sciences (ICLS), USA. Member of the scientific committee from 2014 onwards.

5.6. Presentations as Invited Speaker

Invited Speaker at the 27th Summer School and Conference: "Dynamic Systems and Complexity". (Dedicated to the 70th birthday of Professor Tasos Boudis). National Centre for Scientific Research 'Demokritos', Athens, 19-24 July 2021. Round Table entitled: "Complexity and Education" (T. Boudis, D. Vavougiou, A. Gkiolmas, V. Drakopoulos, T. Michailidis).

5.7. Organisation of Workshops at Greek and International Conferences

- "Teaching and learning with the NetLogo environment, with an emphasis on Physical Sciences". Laboratory Session (Tutorial) at the 6th Panhellenic Conference on ICT in Education, Marasleio Elementary School, Athens, 18-20 October 2019 (in collaboration with Chalkidis, A., Stoumpa, A., Valkanou, E. M., Hatzara, E., & Dalouka, D. E.).
- "Applications of Audacity Audio Processing Software in Physics Experiments". Workshop Session at the 6th Panhellenic Conference on ICT in Education, Marasleio Elementary School, Athens, 18-20 October 2019 (in collaboration with Lazos, P., Stoumpa, A., & Chalkidis, A.).
- "Students work in an Arduino environment, in an organised pedagogical framework and create their own "sensors". Workshop Session at the 6th Panhellenic Conference on ICT in Education, Marasleio Elementary School, Athens, 18-20 October 2019 (in collaboration with Chalkidis, A., Stoumpa, A., Lazos, P., Hatzara, E., Valkanou, E. M., & Dalouka, D. E.).
- Workshop for Informatics and Science teachers: "Teaching concepts of complexity using models, in a multi-agent system (NetLogo). Interventions in the algorithm / implementation code of the model". 8th Conference on Informatics in Education (CIE 2016). University of Piraeus, 14-16 October 2016 (in collaboration with Chalkidis A., Stoumpa, A., Kontaxis, M., & Skordoulis, C.).
- "Teaching concepts of complexity in nature, using models in the multi-agent environment of NetLogo simulations". 10th Panhellenic Conference on Teaching Natural Sciences and New Technologies in Education, Department of Primary Education, University of Crete. Rethymno, 7-9 April 2017. Website: <http://synedrio2017.enepnet.gr/index.php/en/>.
- "Fire in the Forest: Teaching Complexity Concepts Using Models in a Multi-agency Simulation Environment (NetLogo)". 5th Panhellenic Conference "Integration and Use of ICT in Education", ΑΣΠΑΙΤΕ, 21-13 April 2017.

6. WRITING AND RESEARCH

6.1. Writing: Teaching Notes

6.1.1. "Laboratory Guide" for the compulsory course: "Natural Sciences I: Physics, Laboratory", for undergraduate students at the University of Athens (in collaboration with C. Skordoulis, C. Stefanidou, P. Lazos, D. Skordos, K. Tsalapati and A. Ferentinou)

6.1.2 "Remote Laboratory Guide 2020-21" for the compulsory course: "Natural Sciences I: Physics, Laboratory", for undergraduate students at the University of Athens (in collaboration with C. Skordoulis, C. Stefanidou, P. Lazos, K. Tsalapati, V. Michalopoulos, E. Chatzara, K. Kyriakou, A. Stoumpa and A. Ferentinou)

6.1.3. "User manual for the oscilloscope: (Oscilloscope – Introduction, 3rd Grade of Gymnasium)". Website: <http://ekfe-ilioup.att.sch.gr/index.php/2009-09-28-07-13-25>

6.2. RESEARCH PROJECTS

6.2.1. Features in Collected Volumes

6.2.1.1. *Towards Critical Environmental Education: Current and Future Perspectives*. (2020). Editors: Aristotelis Gkiolmas & Constantine Skordoulis. Publishers: Springer Publishers, the Netherlands. Series' Editor: Shirley Steinberg.

6.2.1.2. *Teaching Physics through History of Science and Historical Experiments*. Guest Editor: Aristotelis Gkiolmas. Publishers: Cambridge Scholars (Proposal approved and contract signed).

6.2.2. Chapters in Collected Volumes

6.2.2.1. Gkiolmas, A., Stoumpa, A., Chalkidis, A., & Skordoulis, C. (2021). "A combination of historical Physics' documents and other teaching tools for the instruction of prospective teachers in Chaos and Complexity". In Sidharth, B. G., Carnicer, J., Micheline, M., & Perea, C. (eds.) *Fundamental Physics and Physics Education Research*. Springer Publishers, pp. 251-261.

6.2.2.2. Gkiolmas, A., Stefanidou, C., & Skordoulis, C. (2020). "Critical Pedagogy and the Acceptance of Refugees in Greece". In Steinberg, S. R., Down, B. (eds.) and Robinson, J. (ass. ed.), *The SAGE Handbook of Critical Pedagogies*. Pp. 439-452 (Volume 1, Chapter 42).

6.2.2.3 Gkiolmas, A., Papaconstantinou, M., Chalkidis, A., & Skordoulis, C. (2016). Multi-Agent Models, Made in NetLogo, for Teaching Simple Properties of Complex Natural Systems, and their Instructional Use. In: Zacharoula Smyrniou, Martin Riopel & Menelaos Sotiriou (Editors) : *Recent Advances in Science and Technology Education, Ranging from Modern Pedagogies to Neuro-education and Assessment*, pp. 146-157. Cambridge Scholars Publishing: Newcastle upon Tyne, UK.

6.2.3. Articles in International Journals

6.2.3.1. Karamanos, K., Gkiolmas, A., Chalkidis, A., Skordoulis, C., Papaconstantinou, M., & Stavrou, D. (2012). "Ecosystem Food-webs as Dynamic Systems: Educating Undergraduate Teachers in Conceptualizing Aspects of Food-webs' Systemic Nature and Comportment". *Advances in Systems Science and Applications*, Vol.12, No.4, pp.49-68.

6.2.3.2. Gkiolmas, A., Karamanos, K., Chalkidis, A., Skordoulis, C., Papaconstantinou, M., & Stavrou, D. (2013). "Using simulations of NetLogo as a tool for introducing Greek High-School students to eco-systemic thinking". *Advances in Systems Science and Applications*, Vol.13, No.3, pp. 275-297.

6.2.3.3. Karamanos, K., Gkiolmas, A., & Skordoulis, C. (2011) "Recent developments in the digital approach of symbolic dynamics". *Kybernetes*, Vol. 40, Issue: 5/6, pp. 921-925.

6.2.3.4. Gkiolmas, A., & Skordoulis, C. (2014). "A review of the book: Greening the Academy: Ecopedagogy through the Liberal Arts". *The Journal of Sustainability Education*, 24 December 2014.

6.2.3.5. Skordoulis, C., Toliás, V., Stavrou, D., Karamanos, K., & Gkiolmas, A. (2014). "Teaching Chaos with a Pendulum to Greek Secondary School Students." *Advances in Systems Science and Applications*, Vol.14, No.2, pp. 158-169.

6.2.3.6. Gkiolmas, A., & Chalkidis, A. (2019). "The Interconnection between Critical Media and Social Media Literacy and Science Literacy in Adolescents and Children: A Critical Pedagogy Approach." *The International Journal of Critical Media Literacy*, 1(2), pp. 214-227.

6.2.3.7. Gkiolmas, A., & Chalkidis, A. (2020). "Science and Scientific Discoveries through the lens of Critical Pedagogies". *Taboo: The Journal of Culture and Education*, 19(2), pp. 92-99.

6.2.3.8. Gkiolmas, A., Dimakos, C., Chalkidis, A., & Stoumpa, A. (2020). "An Environmental Education Project that measures particulate matter through an Arduino interface". *Sustainable Futures*, Vol. 2, 100027, ISSN 2666-1888, <https://doi.org/10.1016/j.sftr.2020.100027> (<https://www.sciencedirect.com/science/article/pii/S2666188820300204>). Elsevier Publishers.

6.2.3.9. Gkiolmas, A., Stoumpa, A., Lazos, A., Skordoulis, C., Chalkidis, A., Michalopoulos, V., & Balwit, J. (2021). "An instructional method, based on POE (Predict-Observe-Explain), for teaching two basic wave properties and the wave nature of light". *Journal of Physics* (Publishers: IOP Science): Conference Series, Volume 1929, Issue 1, p. 012086.

6.2.4. Articles in Greek peer-reviewed journals

6.2.4.1. Mandrikas, A., Psomiadis, P., Chalkidis, A., Stoumpa, A., Kyriakou, K., Gkiolmas, A. & Skordoulis, C. (2013). "Teaching Environmental Science: The Challenge". *For Environmental Education* (electronic magazine of ΠΕΕΚΠΕ). Issue 4(49) – 2013.

6.2.4.2. Gkiolmas, A., & Stavrou, I. (2009). "Global Education as an alternative model of education for Sustainability and Social/Environmental Justice: A critical appraisal". *Κριτική / Επιστήμη & Εκπαίδευση* [Critique / Science & Education]. Issue 9, June 2009, pp. 15-32.

6.2.5. Publications in Proceedings of International Conferences

6.2.5.1. Gkiolmas, A., & Skordoulis, C. (2009). "Common Viewpoints between feminist epistemologies and Chaos Theory: A balanced discussion". In Anna Chronaki (ed.) *Mathematics, Technologies, Education: The gender perspective*. University of Thessaly Press. ISBN – 978-960-8029-88-0.

6.2.5.2. Gkiolmas A., Chalkidis A., Papaconstantinou A., Stavrou D., Karamanos K., Skordoulis C. (2010). "Teaching concepts of Complex Systems to prospective Greek Primary School teachers, with the use of NetLogo models". MAPS2 Conference, *Teaching of/with Agent- Based Models in the Social Science*, April 8th-9th, 2010, ENS ULM, Paris, France.

6.2.5.3. Gkiolmas, A., Chalkidis, A., Karamanos, K., Papaconstantinou, M., & Skordoulis, C. (2012). "A Constructionist Method for Teaching Teachers about Basic Properties of Complex Systems, using a NetLogo Model". *Proceedings of Constructionism 2012 Conference*, Athens, Greece, pp. 269-279.

6.2.5.4. Gkiolmas, A., Chalkidis, A., Papaconstantinou, M., Iqbal, Z., & Skordoulis, C. (2014). "An alternative use of the NetLogo modeling environment, where the student thinks and acts like an

Agent, in order to teach concepts of Ecology". Proceedings of the 9th Panhellenic Conference with International Participation "ICT in Education". Rethymno, Crete, 3-5 October, 2014.

6.2.5.5. Gkiolmas A., Papaconstantinou M., Chalkidis A., & Skordoulis C. (2014). "Learning about populations in Ecosystems by 'Building them from inside' with NetLogo: A Constructionist Approach for Teaching Population Ecology's Principles". Proceedings from the International Conference "Constructionism 2014". Vienna, Austria, August 2014.

6.2.5.6. Gkiolmas, A., Papaconstantinou, M., Chalkidis, A. & Skordoulis, C., (2016). "Multi-Agent Models, made in NetLogo, for teaching simple properties of Complex Natural Systems, and their instructional use". In Smyrniou, Z., Riopel, M., & Sotiriou, M. (eds.) *Recent Advances in Science and Technology Education, ranging from modern Pedagogies to Neuro-education and Assessment*. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.

6.2.5.7. Gkiolmas, A., Skordoulis, C., Chalkidis, A., & Stoumpa, A. (2017). "Teacher Empowerment and the Hidden Curriculum: Contradictions in educating victims of war". Proceedings of the 7th International Conference on Critical Education, University of Athens, Greece, 28 June-2 July 2017.

6.2.5.8. Gkiolmas, A., Stoumpa, A., Lazos, P., Skordoulis, C., Chalkidis, A., Michalopoulos, V., & Balwit, J. (2019). "An instructional method for teaching the wave properties of matter and the wave-particle duality to prospective Primary School educators". Proceedings of the GIREP 2019 Conference, Budapest, Hungary, 1st-5th July 2019.

6.2.5.9. Gkiolmas, A., Stoumpa, A., Skordoulis, C., Lazos, P., & Chalkidis, A., (2020) "The historical transition from the Young's double slit experiment to the Davisson – Germer experiment, as taught to undergraduate educators. The educational outcomes and implications". 40th (XL) National and International Congress of the Italian Society for the History of Physics and Astronomy (SISFA). Conducted as an online conference, 7 - 11 September 2020. DOI: 10.12871/978883339517326

6.2.6. Publications in Proceedings from Greek Conferences

6.2.6.1. Gkiolmas, A., Benisi A., Toliou A., Chalkidis, A., Stoumpa A., & Skordoulis, C. (2022). "The NetLogo environment as a Teaching and Learning Tool in the Natural and Environmental Sciences". (Training Workshop). Proceedings of the 7th Panhellenic ΕΤΠΕ Conference: "Integration and Use of ICT in the Educational Process". University of Patras, Patras, 16-18 September 2022.

6.2.6.2. Papanagiotou, Z., Gkiolmas, A., Stoumpa A., Skordoulis, C., Papanagiotou A. T., & Livieratou, T. (2022). "Physics on the mobile phone screen. Physics experiments using mobile phones" (Training Workshop). Proceedings of the 7th Panhellenic ΕΤΠΕ Conference: "Integration and Use of ICT in the Educational Process". University of Patras, Patras, 16-18 September 2022.

6.2.6.3. Gkiolmas, A., Tsalapati, K., Stoumpa, A., Chalkidis, A., & Skordoulis, C. (2020). "Teaching Environmental Justice to undergraduate teachers, using the project method. Methodology and teaching results". 8th Panhellenic ΠΕΕΚΠΕ Conference, Patras, 11-13 September 2020.

6.2.6.4. Gkiolmas A. (2019). "Teaching Complexity concepts and discussing Chaos, utilising NetLogo's Model Library". Presentation at the symposium/conference "The Logo tree in Greece". Athens, October 5, 2019. Website: <https://www.logotreegr.net/omilies>.

6.2.6.5. Gkiolmas A. (2019). "Didactics of Chaos and Complexity". Presentation at the 26th Summer School / Conference: "Dynamic Systems and Complexity", Athens, National Technical University of Athens, 14-20 July 2019. http://complexity2019.ntua.gr/?page_id=212.

6.2.6.6. Gkiolmas, A., Stoumpa, A., Skordoulis, C., Lazos, P., & Chalkidis, A. (2019). "The pre-existing ideas and representations of undergraduate primary school teachers on wave-particle duality, the contribution and diffraction of waves." Proceedings (forthcoming) of the 11th Panhellenic Conference on Didactics of Natural Sciences and New Technologies in Education. 19-21 April 2019. University of Western Macedonia, Department of Primary Education, Florina.

6.2.6.7. Chalkidis, A., Gkiolmas, A., Stoumpa, A., Papakonstantinou, M., Iqbal, Z., Karamanos, K., & Skordoulis, C. (2017). "The collective and emergent behaviour of natural systems, as taught with the help of NetLogo's 'Bird Flocks' Model: A teaching sequence". Proceedings of the 10th Conference on Didactics of Natural Sciences and New Technologies in Education (ENEDET). University of Crete, Rethymno, 7-9 April 2017.

6.2.6.8. Trimis, A., Skordoulis, C., & Gkiolmas, A. (2015). "Teaching Complex Physics Systems to High School Students, using NetLogo Software". Proceedings of the 8th Panhellenic Conference of Teachers for ICT: "Utilisation of Information and Communication Technologies in Teaching Practice". Syros, 26-28 June 2015.

6.2.6.9. Kyriakou K., Gkiolmas, A., Mandrikas A., Tampakis, K., Psomiadis, P., & Skordoulis, C. (2007). "Education of Teachers for Sustainability: Experimental Study of Photosynthesis using New Technologies". 3rd Panhellenic Conference of ΠΕΕΚΠΕ, Athens, 9-11 November 2007.

6.2.6.10. Gkiolmas, A., Chalkidis, A., Papakonstantinou, M., & Skordoulis, C. (2013) . Utilisation of NetLogo in Teaching Two Properties of Complex Systems in Nature. Proceedings of the 3rd Panhellenic Conference "Integration and Use of ICT in the Educational Process". University of Piraeus 10-12 May 2013.

6.2.6.11. Gkiolmas, A., Chalkidis, A., Papakonstantinou, M., & Skordoulis, C. (2011). "Use of simple forms of multi-agent systems for teaching basic properties of Complex Systems" Proceedings of the 2nd Panhellenic Conference: "Integration and use of ICT in the Educational Process", University of Patras, 2011.

6.2.6.12. Gkiolmas, A., Chalkidis, A., Papakonstantinou, M., & Skordoulis, C. (2013). "Utilisation of NetLogo in Teaching Two Properties of Complex Systems in Nature". Proceedings of the 3rd Panhellenic Conference "Integration and Use of ICT in the Educational Process", University of Piraeus, 2013.

6.2.6.13. Gkiolmas, A., Chalkidis, A., Stavrou D., & Skordoulis C. (2008). "The Content of the Concept 'Complexity' as a Feature of Ecosystems. The Educational Value, and the Objectives of its Teaching". Proceedings of the 4th Panhellenic Conference of ΠΕΕΚΠΕ. Nafplio, 12-14 December 2008.

6.2.7. Conference Presentations (Abstracts)

Presentation at an International Conference (Paris, 8-9 April 2010): Aristotelis Gkiolmas, Anthimos Chalkidis, Anastasia Papaconstantinou, Dimitrios Stavrou, Kostas Karamanos & Constantine Skordoulis. "Teaching concepts of Complex Systems to prospective Greek Primary School teachers, with the use of NetLogo models".

<http://maps.hypotheses.org/evenements-maps-passes/maps-2>

6.2.8. Participation in Conferences (proceedings under publication)

6.2.8.1. Benisi, K., Toliou, A., Gkiolmas, A., Chalkidis, A., & Skordoulis, C. (2022). "The use of NetLogo's tool in the educational process: A didactic approach to the problem of climate change". 2nd Symposium – Workshop "The Logo Tree in Greece". University of Piraeus, Athens. 20 November 2022.

6.2.8.2. Matsaga, M., Gkiolmas, A., Boikos, I., Chalkidis, A., Stoumpa, A., Koutromanos, G., & Skordoulis, C. (2022). "Handling Newton's Disc with Scratch". 2nd Symposium – Workshop "The Logo Tree in Greece". University of Piraeus, Athens. 20 November 2022.

6.2.8.3. Chalkidis, A., Chatzara, E., Stoumpa, A., Boikos, I., Gkiolmas, A., & Skordoulis, C. (2022). "Physical computing with Scratch for Arduino for young ages. A proposed sequence of activities based on a few basic pedagogical principles". 2nd Symposium – Workshop "The Logo Tree in Greece". University of Piraeus, Athens. November 20 2022.

6.2.8.4. Anastasiades, D., Gkiolmas, A., Skordoulis, C., Chalkidis, A., & Stoumpa, A. (2022). "A teaching sequence for teaching and learning about sound, the intensities and frequencies of the notes, based on Physical Computing (Arduino) and embodying CLIL strategies". 3rd Panhellenic Conference "Scientix" on STEM education. ΕΚΠΑ, Athens, 23-25 September 2022.

6.2.8.5. Papanagiotou, Z., Livieratou, T., Papanagiotou, A. T., Gkiolmas, A., Skordoulis, C., & Stoumpa, A. (2022). "Arduino devices as a means of measuring temperature and solar radiation". 3rd Panhellenic Conference "Scientix" on STEM education. ΕΚΠΑ, Athens, 23-25 September 2022.

6.2.8.6. Benisi, A., Toliou, A., Gkiolmas, A., Skordoulis, C., Chalkidis, A., & Stoumpa, A. (2022). "Climate change and the role of education: A didactic approach using the NetLogo tool". 3rd Panhellenic Conference "Scientix" on STEM education. ΕΚΠΑ, Athens, 23-25 September 2022.

6.2.8.7. Gkiolmas, A., & Tsalapati, K. (2022). "The Project method, integrated in Critical Pedagogy, as a learning tool in Natural Sciences and Environmental Education: A Case Study." 3rd Panhellenic Conference on Critical Education. Aristotle University of Thessaloniki, Thessaloniki, 4-8 July 2022.

6.2.8.8. Gkiolmas, A. (2022). "‘Alternative Science’: The case with D. Bohm's ‘Implicate Order’". 10th International Conference on Critical Education. Faculty of Education, Aristotle University of Thessaloniki, Greece, 4-8 July 2022.

6.2.8.9. Benisi, A., Toliou, A., Gkiolmas, A., Stoumpa, A., & Chalkidis, A. (2022). "Climate change and the role of education: A didactic approach using NetLogo's tool". 1st ΕΚΠΑ Conference on the Climate Crisis, ΕΚΠΑ, Athens, 15-17 June 2022.

6.2.8.10. Papanagiotou, Z., Gkiolmas, A., Stoumpa, A., Chalkidis, A., Skordoulis, C., & Papanagiotou, A. T. (2022). "Use of Educational Robotics Arrangements by High School Students for Teaching and Learning on Climate Change Parameters". 1st ΕΚΠΑ Conference on the Climate Crisis, ΕΚΠΑ, Athens, 15-17 June 2022.

10. Teacher, by decision of the General Assembly of the Department, of part of the postgraduate course "Experimental Methods and Laboratory Techniques in Natural Sciences" (2017-18). The course involved postgraduate students from the Department of Pedagogy and Primary Education at the National and Kapodistrian University of Athens on the study programme "Physical Sciences in Education".

11. Co-teacher on the same course, "Experimental Methods and Laboratory Techniques in Natural Sciences", during the academic year 2021-22 (winter semester), in the new postgraduate study programme run by the Department of Pedagogy and Primary Education at the University of Athens entitled "Didactic and Public Understanding of Physical Sciences and Digital Technologies".

12. Teacher, during academic years 2018-19, 2019-20, 2020-21, 2021-22 and 2022-23, on the elective undergraduate course "Teaching Physical Sciences with Digital Technologies and Educational Robotics", for students from the Department of Pedagogy and Primary Education at the University of Athens.

13. Co-teacher, during academic years 2020-21, 2021-22 and 2022-23, of the postgraduate course "Laboratory of Educational Robotics I", as part of the postgraduate study programme "STEM Education and Systems of Educational Robotic Devices" run by the Department of Pedagogy and Primary Education at the National and Kapodistrian University of Athens.

Hellenic Open University

Member of the Collaborative Teaching Staff for the Hellenic Open University (HOU) during academic years 2017-2023

Supervisor for 16 postgraduate theses on the programmes ΚΦΕ 60 and ΕΚΠ 66 (HOU, academic years 2017-2022)

Supervisor for one bachelor's thesis on the programme ΚΦΕ 60, and one postgraduate thesis which has been postponed by the student (HOU, academic year 2022-23)

All supervised works can be retrieved from:

[https://apothesis.eap.gr/simple-search?query = % CE%93%CE%9A%CE%99%CE%9F%CE%9B%CE%9C%CE%91%CE%A3](https://apothesis.eap.gr/simple-search?query=%CE%93%CE%9A%CE%99%CE%9F%CE%9B%CE%9C%CE%91%CE%A3)

Principal supervisor for four postgraduate theses on the programme "Education on the Natural and Anthropogenic Environment" (ΕΚΠ 66) and the Postgraduate Programme for the Training of Physical Science Teachers (ΚΦΕ 60).

1. Supervisor, during the academic year 2020-21, for the postgraduate thesis "The contribution of ICT in the implementation of a constructive model for the teaching of Physical Sciences – a case study". Postgraduate student: Christina Zarkadoula. Co-supervisor: Professor D. Koliopoulos.

2. Primary supervisor, during the academic year 2017-18, for the postgraduate thesis "Development of educational material on Environmental Education for the study of particulate matter PM10 and PM2.5. Construction and operation of a low-cost measuring and recording station". Postgraduate student: Konstantinos Dimakos. Co-supervisor: Dr Margarita Aggelidou.

3. Secondary supervisor, during the academic year 2020-21, for the postgraduate thesis "Remote Teaching of Energy Conservation (Engineering, Heat)". Postgraduate student: Anna Chonianaki. Primary supervisor: Professor Constantine Skordoulis.

4. Primary supervisor, during the academic year 2020-21, for the postgraduate thesis "The presence of nature in folk songs: the case of music textbooks from the beginning of the 20th century to the present". Postgraduate student: Nafsika Mantziou. Secondary supervisor: Dr Chrysanthi-Esther Cheimona.

5. Primary supervisor, during the academic year 2021-22, for the following postgraduate theses:

(i) "Distance teaching of Physics (online education): methodology and software development".

Postgraduate student: Ioannis Gkogos. Secondary supervisor: Dr Anastasios Tsiantoulas.

(ii) "A didactic proposal in Chemistry related to the environment: Pollution and methods for its management and prevention. The intended results in terms of Education for Sustainable Development". Postgraduate student: Nikolaos Seferos. Secondary supervisor: Professor Constantine Skordoulis.

(iii) "STEM education: the design of activities and educational scenarios for atmospheric pollution in Biology class at the General Education High School C". Postgraduate student: Efthymia Smyrnaki. Secondary supervisor: Professor Constantine Skordoulis.

CENTER FOR TRAINING AND LIFELONG LEARNING (ΚΕΔΙΒΙΜ)

Teacher, during the academic years 2019-20 and 2020-21, through face-to-face teaching and distance-learning, on the courses "Educational Technology – ICT Systems in Education" as well as "Educational Robotics", for trainees at the seminar "STEM Education – Educational Robotics". Organised by the Department of Pedagogy and Primary Education at the National and Kapodistrian University of Athens.

Teacher Training

June 2013: Seminars on Teaching Environmental Sciences using ICT. Co-organisers: Union of Greek Physicists (ΕΕΦ) and ΠΤΔΕ, ΕΚΠΑ. Department coordinator: Professor C. Skordoulis.

2007: Seminars on Intercultural Education for teachers. Organisers: ΕΕΦ and the University of Thessaly. Supervisor in Athens: Professor C. Skordoulis.

2007-2008: Seminars for primary- and secondary-school teachers, entitled "Training of Executives and Teachers of Environmental Education". Programme: ΕΠΕΑΕΚ II. Coordinator: National Technical University of Athens (Prof. K. Koutsopoulos). ΠΤΔΕ supervisor: Professor C. Skordoulis.

PRODUCTION OF EDUCATIONAL MATERIAL

A. Participation, together with Athanasios Velentzas and Vasileios Pappas, in the three-person team established by the Institute of Educational Policy (IEP) for the restructuring of the Physics curriculum for middle and secondary school (IEP, June and July 2016).

B. Participation in groups set up by IEP for the production of educational material in relation to a single book for Physics, Chemistry, Biology and Geology for General Education. September 2017.

C. Voluntary work (since 2014) creating subtitles in Greek for the remote Massive Open Online Course (MOOC) "Complexity Explorer", run by the Santa Fe Institute in the USA. Website:

<https://www.complexityexplorer.org>

Translated videos: <http://www.amara.org/en/profiles/edit/>,

<http://www.amara.org/en/teams/complexity-explorer/>

Further information: <https://www.complexityexplorer.org/news/52-celebrating-our-subtitle-volunteers>

D. 2016: Participation in the platform for the creation of electronic courses in Astrophysics/Astronomy for teachers: <http://www.space-awareness.org/en/>
Coordinator: Ellinogermaniki Agogi. Supervisor: Mrs Eleftheria Tsourlidaki.

PARTICIPATION IN RESEARCH PROGRAMMES

1. Member of the HEPHAESTUS Research Program team ("Hellenic Philosophy, History and Environmental Science Teaching under Scrutiny"), 2009-2012. This project was a collaboration between the National Hellenic Research Foundation (scientific supervisor: E. Nikolaidis), the Department of Pedagogy and Primary Education at the University of Athens (scientific supervisor: Professor C. Skordoulis), and foreign university departments and research institutes.
Programme website: <http://hpdst.gr/projects/hephaestus>
Personal page on programme website: <http://hpdst.gr/users/aristotelis-gkiolmas>
Publications as part of the programme: <http://www.hpdst.gr/system/files/gkiolmas-2008.pdf>,
<http://www.hpdst.gr/system/files/gkiolmas-2011.pdf>

2. 2011: Member of the implementation team of the Learning by Design Research / Educational Program for Physical Sciences. This programme was aimed at teachers and students in secondary education. Scientific coordinators for the Greek strand: Evgenia Arvaniti (Assistant Professor at the Department of Educational Sciences and Early Childhood Education, University of Patras) and Constantine Skordoulis (ΠΤΔΕ, ΕΚΠΑ).
Programme website: <http://neamathisi.com/learning-by-design>

3. Organiser for the final dissemination event and workshop for the Erasmus Project STEMaP (STEM through Simple Machines). Marasleio, ΠΤΔΕ, ΕΚΠΑ, 18 December 2021.
Scientific supervisor for the programme: Professor Eugenia Koleza, University of Patras.

4. Participant in the "DI-STEM" Program, funded by the Hellenic Institute of Vocational Training and implemented by ΠΤΔΕ, ΕΚΠΑ. Scientific coordinator: Professor C. Skordoulis.

SOCIAL CONTRIBUTIONS / HONORARY DISTINCTIONS AND AWARDS

Award from the Association for the Protection and Development of Ymittos and the Vyronas Forest Protection Volunteer Corps for contributions to the protection of the forest and the ecosystem of Ymittos.

Participant in remote monitoring of the training programme "DRYMOS" at the Association for the Protection and Development of Ymittos (ΣΠΑΥ) and awarded a degree in the specialty "New Skills for New Jobs in the Forest Sector" and in particular in the subsections: a) "Fire Protection and Voluntarism"; and b) "Training of trainers on how to disseminate scientific information to the wider public". The programme was under the supervision of the University of Fribourg.

CITATIONS IN OTHER PAPERS AND CONFERENCES

Cited a total of 49 times in Greek and foreign publications and conference papers, with 33 citations within the last five years (since 2018)¹

¹ Information taken from Google Scholar

Google Scholar profile: Aristotelis Gkiolmas

Samples:

Publication A1: five citations at <https://scholar.google.com/>

Publication A2: nine citations at <https://scholar.google.com/>

Publication A5: two citations at <https://scholar.google.com/>

Publication A8: four citations at <https://scholar.google.com/>

Collected Volume D1: one reference on <https://scholar.google.com/>

Conference presentation: "An alternative use of the NetLogo modelling environment, where the student thinks and acts like an Agent, in order to teach concepts of Ecology". (2014). Two citations on <https://scholar.google.com/>.