

# DIMITRIOS KOLIOPOULOS

## CURRICULUM VITAE

### Personal information

*Surname, First name*    **Koliopoulos Dimitrios**  
*Date of birth*            16/02/1956  
*Home address*            Acropoleos 106, 18451, Athens, Greece  
*Phone / fax number*        +302610969819  
*Sites*                        <http://dkoliopoulos.gr/en/>  
                                      [https://www.researchgate.net/profile/Dimitris\\_Koliopoulos](https://www.researchgate.net/profile/Dimitris_Koliopoulos)

### Current academic post

Professor, Department of Educational Sciences and Early Childhood Education, University of Patras, Greece (retired 31/9/2023)

### Other academic posts

- Visiting Professor at the University of Cyprus (Department of Education / 1999-2000, 2009, 2013).
- Tutor/Advisor at the Hellenic Open University (2004 - today)

### Education

- 1997    PhD in Education, University of Patras. Dissertation Title: Epistemological and didactic dimensions of the curriculum construction process. The case of the didactical transposition and learning of the concept of energy
- 1983    DEA in Science and Technology Education, University of Paris 7 (Jussieu)
- 1981    AESA in Scientific Museology, University of Paris 7 (Jussieu)
- 1979    B.A. in Physics, Aristotle University of Thessaloniki

### Research interests / activities

- (a) Study of epistemological and didactic dimensions of the transformation of scientific knowledge in school science knowledge and development of relevant teaching materials.
- (b) Study and development of training models for pre-service and in-service teachers of all educational grades concerning science education and science museum education. In this context, I have founded the research and educational group “Energy in Education”, that aims to a reliable design, systematic evaluation and valid dissemination of educational activities related to teaching the concept of energy and its social uses (<http://energyeducationen.blogspot.com/>).

(c) Study of students' mental representations on natural phenomena and concepts of natural sciences before, during and after teaching.

My research work has been documented in publications in scientific journals and has been reported in scientific conferences (attached list of publications).

### **Participation in research projects**

- ✓ (2003-2005) “Pratiques d’écriture et instrumentation du psychisme : Approches psychologiques et didactiques” (Coord. Pr. A. Weil-Barais – Université d’Angers, France).
- ✓ (2004-2007) “Design, implementation and evaluation of educational projects for preschool children in the Zoological Museum of the Biology Department at the University of Patras” (Coordinator, University of Patras, Greece).
- ✓ (2008-2010) HIPST “History and Philosophy in Science Teaching” (Coord. Pr. D. Höttecke - Universität Bremen, Germany - FP7).
- ✓ (2009-2010) “Design, implementation, evaluation and research validation of a unifying framework concerning mathematical and scientific literacy in primary education in Cyprus” (Coord. Ch. Papadimitri, EUC Research Center Ltd, Cyprus).
- ✓ (2010 – 2013) Fibonacci “Design, implement and test a process of dissemination in Europe of inquiry-based teaching and learning methods in science and mathematics” (Coord. École Normale Supérieure, France / Bayreuth University, Germany - FP7). The dissemination strategy of Fibonacci is based on a network of 12 Reference Centres throughout Europe which have a recognized expertise for sustainable inquiry-based scientific education implementation at local or regional level.
- ✓ (2009-2013) “Heraclitus II” (D.276.001.004, Coordinator, Greece).
- ✓ (2011-2013) “Light and color in arts and sciences. Design and evaluation of educational material for preschool and primary education” (Coord. X. Arapaki, University of Thessaly, Greece).
- ✓ (2011-2012) National ambassador for the European competition “U4Energy”.
- ✓ (2012-2015) Erasmus Mundus, Action 2 (Coord. Université d’Aix-Marseille, France).
- ✓ (2013-2016) HOPE – Horizons in Physics Education (Coord. N. Witkofski, Université Pierre et Marie Curie / UPMC).
- ✓ (2020-2022) CRSH-Connexion -‘L’archéologie à l’ère de la médiation scientifique’ (Co-coord. Pr. A. Meunier, UQAM, Montréal)
- ✓ (2021-2024) ALeMP – Adaptive Learning Management Platform for STEM (Coord. P.P. Corso, Università degli Studi di Palermo).

- ✓ (2004 - today) Erasmus (+) (Université d'Aix-Marseille, France – University of Cyprus, University of Nicosia, Cyprus - Université de Bretagne Occidentale, France - Université Paris Sud, France - University of Palermo, Italy, Université du Québec à Montréal, Canada, Hebrew University of Jerusalem-Israel).

### **Other scientific and administrative activities**

- Guest co-editor for a special issue of 'Science and Education' (*History of Science in Museums*) (2014) [with A. Filippopoliti]
- Guest editor for a special issue of 'Science and Education' (*The 4th Hellenic Conference on the History and Philosophy of Science and Science Teaching*) (2009)
- Guest co-editor for a special issue of 'Review of Science, Mathematics and ICT Education' (*Energy in Education*) (2012) [with C. Constantinou]
- National representative for OECD Programme for International Student Assessment (PISA):
  - 2002 3rd Meeting of National Project Managers (Melbourne, 20/10 - 25/10/2002)
  - 2003 1st meeting of the PISA Science Forum (Paris, 3/12 - 4/12/2003)
  - 2003 2nd meeting of the PISA 2006 Science Forum (Paris, 27/2 - 28/2/2003)
  - 2004 Meeting of National Project Managers (Athens, 1/3 - 5/3/2004)
- Member of the editorial board of *Review of Science, Mathematics and ICT Education* published by the Department of Educational Sciences and Early Childhood Education of Patras University (<http://www.ecedu.upatras.gr/review/>)
- Member of the reviewer board of *Science & Education, International Journal of Environmental and Science Education, The Science Education Review, Themes in Science and Technology Education*.
- *Vice Head* of the Department of Educational Sciences and Early Childhood Education (University of Patras / 2011-2013).
- *Head* of the Department of Educational Sciences and Early Childhood Education (University of Patras / 2016 - 2018)
- *Head* of the Department of Museum Studies (University of Patras / 2019)

### **Languages**

Greek, French, English

### A. Journals

1. I. Ioannidou, N. Sissamperi & **D. Koliopoulos** (2023). An immersive learning environment on the introduction of power generation systems for pre-service teachers of early childhood education. *Mediterranean Journal of Education*, 3(2), 119-129.
2. Georgopoulou, K. Meli & **D. Koliopoulos** (2022). An interpretive and pedagogical approach of archaeological collections in the light of natural sciences: the notion of Science Educative Islet. *Review of Science, Mathematics, and ICT Education*, 16(1), 49-75.
3. K. Meli, **D. Koliopoulos** & K. Lavidas (2021). A model-based constructivist approach for bridging qualitative and quantitative aspects in teaching and learning the first law of thermodynamics, *Science & Education*, 31(2), 451-485.
4. E. Gkouskou & **D. Koliopoulos** (2021). Describing the educational role of Natural History museums: An analysis tool for pre-service and in-service teachers. *European Journal of Educational Studies*, 8(1), 217-234.
5. N. Sissamperi & **D. Koliopoulos** (2021). How students of primary school understand large scale energy systems: the case of thermal power plant. *Journal of Technology and Science Education*, 11(1), 129-145.
6. P. Georgopoulou, **D. Koliopoulos** & A. Meunier (2021). The dissemination of elements of scientific knowledge in archaeological museums in Greece: Socio-cultural, epistemological and communicational/educational aspects. *Scientific Culture*, 7(1), 31-44.
7. N. Delegkos & **D. Koliopoulos** (2020). Constructing the 'energy' concept and its social use by students of primary education in Greece. *Research in Science Education*, 50 (2), 393-418.
8. K. Meli, K. Lavidas & **D. Koliopoulos** (2020). Factors that influence students in choosing physics programmes at university level: The case of Greece. *Research in Science Education*, 50 (4), 1075 – 1091.
9. K. Meli & **D. Koliopoulos** (2019). Model-based simulation design for the students' conceptual understanding of introductory thermodynamics. *Journal of Physics: Conf Series 1287*. doi:10.1088/1742-6596/1287/1/012054.
10. A. Dalapa, V. Vagena, N. Sissamperi & **D. Koliopoulos** (2019). Using a hydraulics bench to investigate 6th grade students' energy conceptions. *Educational Journal of the University of Patras UNESCO Chair*, 6(1), 225-231.
11. V. Stavropoulos & **D. Koliopoulos** (2019). Teaching energy concepts in complex technological systems: The case of the car. *Educational Journal of the University of Patras UNESCO Chair*, 6(1), 308-314.
12. A. Parissi, A. Laourdeki & **D. Koliopoulos** (2019). Characterization of minerals based on geological criteria by children in early school years in a non-formal educational setting. *Educational Journal of the University of Patras UNESCO Chair*, 6(1), 380-386.
13. D. Dziva, M.R. Nyikahadzoyi, K. Ravanis & **D. Koliopoulos** (2018). Teacher knowledge manifestation of Integrated Science Teachers in Zimbabwe. *Open Journal for Educational Research*, 2(2), 57-72.

14. M.R. Mabeyane, T. Nyabanyaba, **D. Koliopoulos** & K. Ravanis (2017). The probable causes for the espoused inadequacies in science student teachers' practice teaching in schools at the National University of Lesotho. *Journal of Subject Didactics*, 2(1), 1-19.
15. K. Meli, **D. Koliopoulos**, K. Lavidas & G. Papalexiou (2016). Upper secondary school students' understanding of adiabatic compression. *Review of Science, Mathematics and ICT Education*, 10(2), 131-147.
16. K. Meli, K. Zacharos & **D. Koliopoulos** (2016). The Integration of Mathematics in Physics Problem Solving: A Case Study of Greek Upper Secondary School Students. *Canadian Journal of Science, Mathematics and Technology Education*, 16(1), 48-63.
17. S. Tantaros, K. Ravanis, **D. Koliopoulos**, K. Sarigianni, & E. Sotiropoulou (2016). L'utilisation des prises de notes dans le cadre d'une activité scientifique chez les enfants de 5 à 12 ans., *Magis, Revista Internacional de Investigación en Educación*, 8(17), 13-26.
18. N. Sissamperi & **D. Koliopoulos** (2015). A didactical approach of large - scale electricity generation systems at the elementary school level. *Educational Journal of the University of Patras UNESCO Chair*, 2(2), 14-24.
19. Filippopoliti & **D. Koliopoulos** (2014). Informal and non-formal education: An outline of History of Science in museums. *Science & Education*, 23 (4), 781-791.
20. **D. Koliopoulos**, J-M. Boilevin, S. Dossis, E. Paraskevopoulou & K. Ravanis (2013). Rapport au savoir scientifique de futurs professeurs des écoles en France et en Grèce : le cas du pendule. *Recherches en Didactique des Sciences et des Technologies*, 8, 163-188
21. K. Ravanis, C. Ben Kilani, J.-M. Boilevin & **D. Koliopoulos** (2013). Représentations et obstacles des élèves de 10 ans pour la formation des ombres. *Journal of Didactics*, 4(1), 1-14.
22. **D. Koliopoulos**, A. Aduriz-Bravo, K. Ravanis (2011). El «análisis del contenido conceptual» de los currículos y programas de ciencias: una posible herramienta de mediación entre la didáctica y la enseñanza de las ciencias, *Enseñanza de las Ciencias*, 29(3), 315-324.
23. **D. Koliopoulos**, E. Gkouskou & X. Arapaki (2012). How to design a teaching intervention about the concept of classification of animals for preschool children in the framework of cooperation between school and zoological museum? *Skholé*, 17, 21-25.
24. E. Paraskevopoulou & **D. Koliopoulos** (2011). Teaching the Nature of Science through the Millikan-Ehrenhaft dispute. *Science & Education*, 20(10), 943-960.
25. **D. Koliopoulos** & M. Argyropoulou (2011). Constructing qualitative energy concepts in a formal educational context with 6 – 7-year-old students. *Review of Science, Mathematics and ICT Education*, 5(1), 63-80.
26. X. Arapaki & **D. Koliopoulos** (2010). Popularization and teaching of the relationship between visual arts and natural sciences: historical, philosophical and didactical dimensions of the problem. *Science & Education*, 20, 7, 797-803.
27. **D. Koliopoulos**, V. Christidou, I. Symidala & M. Koutsoumba, (2009). Pre-energy reasoning in pre-school children. *Review of Science, Mathematics and ICT Education*, 3, 1, 123-140.
28. K. Ravanis & **D. Koliopoulos** (2008). Proceduri didactice de destabilizare și de reconstruire a sistemului de reprezentări spontane referitoare la formarea umbrelor la elevii de 10 ani, *Revista de Psihologie și Științele Educației* 2, 2, 3-11.

29. S. Dossis & **D. Koliopoulos** (2007). Comment les élèves du collège conçoivent le mouvement du pendule : une recherche empirique. *Skholê, hors-série 1*, 41-51.
30. **D. Koliopoulos**, S. Dossis & E. Stamoulis (2007). The use of history of science texts in teaching science: Two cases of an innovative, constructivist approach, *The Science Education Review*, 6, 2, 44-56.
31. K. Ravanis, **D. Koliopoulos** & J-M Boilevin (2007), Construction of a Precursor Model for the Concept of Rolling Friction in the Thought of Preschool Age Children: A Socio-cognitive Teaching Intervention, *Research in Science Education*, 38, 4, 421-434.
32. K. Zacharos, **D. Koliopoulos**, M. Dokimaki & H. Kassoumi (2007), Views of prospective early childhood education teachers, towards mathematics and its instruction, *European Journal of Teacher Education*, 30, 3, 305-318.
33. **D. Koliopoulos**, J-M Boilevin & K. Ravanis (2005), La classification du contenu conceptuel des curriculums concernant l'énergie comme outil éducatif, *Ensaio, Pesquisa em Educação em Ciências*, 7, 1, 63-75.
34. **D. Koliopoulos** & C. Constantinou (2005), The pendulum as presented in school science textbooks of Greece and Cyprus, *Science & Education*, 14, 1, 59-73.
35. K. Ravanis, **D. Koliopoulos** & Y. Hadjigeorgiou (2004), What factors does friction depend on? A socio-cognitive teaching intervention with young children, *International Journal of Science Education*, 26, 8, 997-1007.
36. **D. Koliopoulos**, S. Tantaros, M. Papandreou & K. Ravanis (2004) Preschool children's ideas about floating: a qualitative approach, *Journal of Science Education*, 5, 1, 21-24.
37. **D. Koliopoulos** (2003), Blunting the tensions between informal and formal education in science: reforming the relationship between the school and the science museum in Greece, *Mediterranean Journal of Educational Studies*, 8, 1, 81-95.
38. **D. Koliopoulos** & K. Ravanis (2001), Didactic implications resulting from students' ideas about energy: an approach to mechanical, thermal and electrical phenomena, *Themes in Education*, 2, 2-3, 161-173.
39. **D. Koliopoulos** & K. Ravanis (2000), Réflexions méthodologiques sur la formation d'une culture concernant le concept d'énergie à travers l'éducation formelle, *Revue de Recherches en Education : SPIRALE*, 26, 73-86.
40. **D. Koliopoulos** & K. Ravanis (2000), Elaboration et évaluation du contenu conceptuel d'un programme constructiviste concernant l'approche énergétique des phénomènes mécaniques, *Didaskalia*, 16, 33-56.
41. **D. Koliopoulos** & K. Ravanis (1998), L'enseignement de l'énergie au collège vu par les enseignants. Grille d'analyse de leurs conceptions, *Aster, Institut National de Recherche Pédagogique*, 26, 165-182.
42. **D. Koliopoulos**, P. Kariotoglou & D. Psillos (1986), La force dans le contexte des liquides ; une première approche des conceptions des élèves sur la mécanique des liquides, au collège, en Grèce, *Feuilles d'Epistémologie Appliquée et de Didactique des Sciences*, 8, 59-65.
43. **D. Koliopoulos** & A. Tiberghien (1986), Éléments d'une bibliographie concernant l'enseignement de l'énergie au niveau des collèges, *Aster, Institut National de Recherche Pédagogique*, 2, 167-178.

## **B. Conferences (Proceedings)**

1. K. Meli, **D. Koliopoulos** & K. Lavidas (2022). Physics teachers' training webinars for teaching and learning introductory thermodynamics in upper secondary school, ESERA 2021 Conference e-Proceedings, (Accepted).
2. K. Meli & **D. Koliopoulos** (2020), Research-based design of a teaching and learning sequence of the first law of thermodynamics, ESERA 2019 Conference e-Proceedings series titled "The Beauty and Pleasure of Understanding: Engaging with Contemporary Challenges Through Science Education" 622-630, Bologna.
3. K. Meli & **D. Koliopoulos** (2019), Teaching and Learning of the First Thermodynamics Law: The Sufficiency of the Macroscopic Framework from an Epistemological and Didactical Perspective. In F. Seroglou & V. Koulountzos (Eds.) Proceedings of 15th International History, Philosophy and Science Teaching Conference, 140-147, Grafima Publications.
4. P. Georgopoulou & **D. Koliopoulos** (2017). Archaeological museums as environments of informal and non-formal science and technological education: The case of Educative Islets. In V. Ferrara (Ed.) *Proceedings of the EdMuse Conference 'Education and Museum: Cultural Heritage and Learning'*, 100 - 103, Rome, Sapienza Università di Roma.
5. **D. Koliopoulos** (2014). Is it possible to teach energy in preschool education? In F. Tasar (Ed.) *Proceedings of the WCPE Conference*, Ankara, Gazi Üniversitesi, 457-461.
6. N. Kanderakis, S. Dossis & **D. Koliopoulos** (2011). Teachers' conceptions about the implementation of a HPS sequence concerning the movement of a simple pendulum, In F. Seroglou, V. Koulountzos & A. Siatras (Eds.) *Proceedings of the 11<sup>th</sup> International IHPST and 6th Greek History, Philosophy and Science Teaching Joint Conference 'Science and Culture: Promise, Challenge and Demand'*, 394-396, Thessaloniki, Epikentro.
7. F. Seroglou, S. Dossis, N. Kanderakis, **D. Koliopoulos**, V. Koulountzos, P. Papadopoulos, E. Paraskevopoulou, P. Piliouras, N. Tsagliotis & G. Vleioras (2011). Developing and using evaluation research tools for science teaching cases informed by the History and Philosophy of Science. In F. Seroglou, V. Koulountzos & A. Siatras (Eds.) *Proceedings of the 11<sup>th</sup> International IHPST and 6th Greek History, Philosophy and Science Teaching Joint Conference 'Science and Culture: Promise, Challenge and Demand'*, 687-696, Thessaloniki, Epikentro.
8. **D. Koliopoulos**, S. Dossis & N. Kanderakis (2010). The attitudes of students toward the introduction of case histories inspired from the History of Science in the teaching of Science, <http://www.hipst.uni-hamburg.de/archive%20of%20papers.html> (30/9/2010).
9. S. Tantaros, K. Sarigianni, E. Sotriropoulou, **D. Koliopoulos** & K. Ravanis (2008). Etude des notations à visée communicationnelle par des enfants d'une école primaire en Grèce dans le cadre d'une activité scientifique, In A. Weil-Barais, E. Marti & K. Ravanis (2005) *Actes du Colloque Internationale 'Noter pour Penser, Approches Développementales et Didactiques'*, Université d'Angers, Laboratoire de Psychologie, <http://ead.univ-angers.fr/~confluences/spip.php?article614> (16/10/2008).
10. S. Dossis & **D. Koliopoulos** (2005), The problem of Timekeeping with the Help of the Simple Pendulum: An Empirical Study of 14-15-year-old Greek School Students, In M. Matthews (Ed.) *2<sup>nd</sup> International Pendulum Project*, 65-78, Sydney, University of New South Wales.
11. **D. Koliopoulos** & X. Arapaki (2004), Art, science, and technology in early childhood education: constructing an in-service training program about the notion of color, In G. Haktanir & T. Guler (Eds.) *Proceedings of OMEP 2003 World Conference*, v.1, 260-269, Yayima Hazirlyandar Editors.

12. **D. Koliopoulos** & C. Constantinou (2002), An analysis of the treatment of the simple pendulum in Greek and Cypriot science curricula, In M. Matthews (Ed.) *International Pendulum Project, Conference papers*, 239-250, Sydney, University of New South Wales.
13. V. Zogza, K. Ravanis, G. Bagakis & **D. Koliopoulos** (2001), Working with sciences in kindergarten: Didactic strategies, In G. Bisdikian et al. (Eds.) *Proceedings of the 3rd International Conference of ESERA "Science Education Research in the Knowledge based Society"*, vol. 2, 709-711, Aristotle University of Thessaloniki.
14. **D. Koliopoulos** & K. Ravanis (1999), La classification du contenu conceptuel des curriculums concernant l'énergie : Vers une modélisation des points de vue sur l'enseignement de l'énergie, *Rencontres Scientifiques de l'Association pour la Recherche en Didactique des Sciences et Techniques*, 156-160, ARDIST.
15. **D. Koliopoulos**, G. Bagakis & Y. Papamichael (1996), Qualitative analysis of junior secondary science textbooks: the case of energy concept, In M. Kondyli & Y. Papamichael (Eds.), *Proceedings of the UNESCO's International workshop: Pedagogical research and school textbooks elaboration*, 53-56, UNESCO Chair of Patras University.
16. G. Bagakis, G. Fassouloupoulos, N. Kanderakis, P. Kariotoglou, **D. Koliopoulos**, D. Spirakos & E. Theodoropoulos (1991), A framework for approaching the friction concept and its treatment in textbooks, In K.M. Paraskevopoulos (Ed.) *Proceedings of the 1st General Conference of the Balkan Physical Union*, v.1, 33-35, Hellenic Physical Society, Thessaloniki Branch.

### C. Chapters in books / Editions

1. E. Pappa & **D. Koliopoulos** (2023). Pseudoscience in the era of Covid-19: The case of Greece. In M.W. Bauer & B. Schiele (Eds.) *Science communication: taking a step back to move forward*. CNRS Editions.
2. E. Pappa & **D. Koliopoulos** (2021). Attempts to categorize and evaluate science festivals, a 30-year-old science communication event: The case of Greece. In B. Schiele et al (Eds) *Science cultures in a diverse world: Knowing, sharing, caring*, 77-89.
3. Filippopoliti & **D. Koliopoulos** (2014). Informal and non-formal education: History of science in museums. In M. Matthews (Ed.) *International Handbook of Research in History, Philosophy and Science Teaching*. Springer, 1565-1582
4. **D. Koliopoulos** & C. Constantinou (2005). The Pendulum as Presented in School Science Textbooks of Greece and Cyprus, In M. Matthews, C. Gauld & A. Stinner (Eds.) *The Pendulum, Scientific, Historical, Philosophical & Educational Perspectives*, 449-463, The Netherlands, Springer.
5. **D. Koliopoulos** & A. Vavouraki (Eds.) (2005). *Science Education at Crossroads: Meeting the Challenges of the 21st Century*, Athens, Association for Science Education (EDIFE).

### D. Books [In Greek]

1. **D. Koliopoulos** & **K. Meli** (2022). *The teaching of energy. Epistemological and didactic dimensions*, Thessaloniki, University Studio Press.
2. **D. Koliopoulos** (2017). *The didactic approach of science museum*, Athens, Metaixmio (2nd edition)
3. **D. Koliopoulos** (2006). *Issues in Science Education. The formation of school knowledge*, Athens, Metaixmio.



## **E. Presentations in international conferences**

1. K. Meli, **D. Koliopoulos** & K. Lavidas, Utilizing physics teachers' epistemological and pedagogical conceptions on thermodynamics to develop training programs, GIREP Conference 2022, "Effective Learning in Physics from Contemporary Physics to remote Settings", Ljubljana, Slovenia, 4-8 July 2022.
2. **D. Koliopoulos** & K. Meli, Educational programs integrated visits to the Science and Technology Museum: A research framework, 15h International Conference on Inclusive Museum, Moore College of Art & Design, Philadelphia, USA, 22-24 April 2022.
3. K. Meli, **D. Koliopoulos** & K. Lavidas, Physics teachers' training webinars for teaching and learning introductory thermodynamics in upper secondary school, 14th Conference of the ESERA, University of Minho-Braga, 30 August - 3 September 2021.
4. E. Pappa & **D. Koliopoulos**, Analysis and assessment of the designing process of Science Festival activities. A Greek case study, Science & You Conference, Metz, 16-19 November 2021 (<http://www.science-and-you.com/en/SS5>).
5. E. Pappa & **D. Koliopoulos**, Pseudoscience in the era of COVID-19: the case of Greece, Science & You Conference, Metz, 16-19 November 2021 (<http://www.science-and-you.com/en/SS6>).
6. E. Pappa & **D. Koliopoulos**, Developing a methodological tool to analyze and evaluate the design of Science Festival activities. Theoretical considerations and practical implications, Virtual Conference, 24-27 May 2021 (<https://pcst.co/archive/virtual/paper/791>).
7. P. Georgopoulou, A. Meunier & **D. Koliopoulos**, Archaeometry as an interdisciplinary field of exhibition design and non-formal education, 13<sup>th</sup> International Conference on The Inclusive Museum, Lisbon, 3-5 September 2020.
8. K. Meli & **D. Koliopoulos**, Research-based design of a teaching and learning sequence for the first law of thermodynamics, ESERA 2019 Conference "The beauty and pleasure of understanding: Engaging with contemporary challenges through science education", Bologna, 26-30 August 2019.
9. K. Meli & **D. Koliopoulos**, Teaching and Learning of the First Thermodynamics Law: The Sufficiency of the Macroscopic Framework from an Epistemological and Didactical Perspective, 15th International History, Philosophy and Science Teaching Conference, Thessaloniki, 15-19 July 2019
10. A. Dalapa, V. Vagena, N. Sissamberi & **D. Koliopoulos**, Using a hydraulics bench to investigate 6th grade students' energy conceptions, SIEST Conference "Science and technology education for all", Patras, 3-5 April 2019.
11. V. Stavropoulos & **D. Koliopoulos**, Teaching energy concepts in complex technological systems: The case of the car, SIEST Conference "Science and technology education for all", Patras, 3-5 April 2019.
12. A. Parissi, A. Laourdeki & **D. Koliopoulos**, Characterization of minerals based on geological criteria by children in early school years in a non-formal educational setting, SIEST Conference "Science and technology education for all", Patras, 3-5 April 2019.
13. E. Pappa & **D. Koliopoulos**, Science Festivals: A science communication approach that needs further evaluation, Science and You International Conference on Science Communication, Beijing, 15-17 September 2018.
14. K. Meli & **D. Koliopoulos**, Simulation design for the students' conceptual understanding of introductory thermodynamics, GIREP-MPTL 2018 Conference 'Research and Innovation in Physics education: Two sides of the same coin, San Sebastian, 9-13 July, 2018.

15. Koufou, P. Georgopoulou, G. Manolopoulou, G. Papadopoulou & **D. Koliopoulos**, Cultural networks and innovative practices: Towards a dynamic cooperation between museum and education through three Greek case studies, 2018 YOCOCU Conference 'Dialogues in Cultural Heritage', Matera, 23-25 May, 2018.
16. **D. Koliopoulos**, Musées de science : Études de cas en Grèce. Séminaire EREST-GREM, Université de Québec à Montréal (UQAM), Montréal, 28 Mars, 2018 (*Invited conference presentation*)
17. P. Georgopoulou & **D. Koliopoulos**, Archaeological museums as environments of informal and non-formal science and technological education: The case of Educative Islets, EdMuse Conference 'Education and Museum: Cultural Heritage and Learning', Rome, 26-27 July 2017.
18. **D. Koliopoulos**, K. Meli, K. Lavidas & G. Papalexiou, Upper secondary school students' understanding of adiabatic compression, Colloque SIEST 'Enseignement des sciences et technologies dans une société de la connaissance', ESPE, Aix-Marseille Université, 11-13 Novembre, 2016.
19. **D. Koliopoulos**, K. Lavidas & K. Meli, Report on Factor Analysis for HOPE University Students Questionnaire: The case of University of Patras, Greece, HOPE Annual Forum 2016, University of Bucharest and Constanta Maritime University, 7-10 September 2016.
20. **D. Koliopoulos** & X. Arapaki, Constructing a training program about light and color concerning pre and in-service teachers, HOPE Annual Forum 2016, University of Bucharest and Constanta Maritime University, 7-10 September, 2016.
21. K. Meli & **D. Koliopoulos**, Factors that bring together and keep apart choosers and non-choosers of physics studies at university level in Greece, HOPE Annual Forum 2015, University of Coimbra, Coimbra 9-12 September 2015.
22. Filippopoliti & **D. Koliopoulos**, Rethinking the values of science heritage: Learning strategies for accessible university science museums, XVI Universeum Network Meeting, National and Kapodistrian University of Athens, 11-13 June 2015.
23. Filippopoliti & **D. Koliopoulos**, Science museums/centres and early childhood education: Some possible factors that should affect the conceptual dimension of education programmes, 2012 CIMUSET Conference: Brighter perspectives for science and technological museums, Tampere/Helsinki, 28-31/8, 2012.
24. **D. Koliopoulos**, Is it possible to teach energy in preschool education? WCPE, The world conference on physics education, Istanbul, 1-5 July 2012.
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  36. S. Dossis & **D. Koliopoulos**, The problem of Timekeeping with the Help of the Simple Pendulum: An Empirical Study of 14-15-year-old Greek School Students, 2nd International Pendulum Project, Sydney, Australia, 13-15 October 2005.
  37. S. Tantaros, K. Sarigianni, E. Sotiropoulou, **D. Koliopoulos** & K. Ravanis, Etude des notations au but communicationnel par les enfants d’une école primaire en Grèce dans le cadre d’une activité scientifique, Colloque International « Noter pour Penser », Angers, France, 27-28 Janvier 2005.
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44. K. Ravanis, G. Bagakis & **D. Koliopoulos**, The utilization and operation of the thermometer as a technical tool for the thought of pre-scholars, 3rd Warwick International Early Years Conference, University of Warwick, Coventry, UK, 12-16 April 1999.
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47. **D. Koliopoulos**, P. Kariotoglou & D. Psillos, Introducing energy in the secondary school: the case of the energetical chains, 1st General Conference of the Balkan Physical Union, Thessaloniki, Greece, September 1991.
48. **D. Koliopoulos**, A. Tiberghien & D. Psillos, Role of students' interpretation in the development of teaching situations based on experiments. The case of an introductory teaching of energy in Greece (12-14 years old), 3rd European Conference for Research on Learning and Instruction, Madrid, Spain, September 1989.
49. P. Kariotoglou, **D. Koliopoulos** & D. Psillos, A study of pupils' conceptions about fluids: The case of pressure in liquids, 3rd European Conference for Research on Learning and Instruction, Madrid, Spain, September 1989.

#### **F. Editorials - Reviews**

1. [Book Review] **D. Koliopoulos** (2016). Robert F. Chen, Arthur Eisenkraft, David Fortus, Joseph Krajcik, Knut Neumann, Jeffrey Nordine & Allison Scheff (eds) (2014): Teaching and Learning of Energy in K-12 Education. Springer. *Science & Education*, 25(1), 235–239.
2. [Book Review] **D. Koliopoulos** (2015). Kieran Egan, Annabella Cant & Gillian Judson (eds): Wonderful Education: The Centrality of Wonder in Teaching and Learning Across the Curriculum. Springer. *Science & Education*, 24(4), 459-461.
3. **D. Koliopoulos** (2015). History, Philosophy and Science Teaching. *Review of Science, Mathematics and ICT Education*, 9(1), 3-5.
4. A. Filippopoliti & **D. Koliopoulos** (2014). History of Science in Museums: Introduction. *Science & Education*, 23(4), 715-718.
5. **D. Koliopoulos** & C. Constantinou (2013). Energy in Education. *Review of Science, Mathematics and ICT Education*, 6(1), 3-6.
6. **D. Koliopoulos** (2009). The 4th Hellenic Conference on the History and Philosophy of Science and Science Teaching "The Cultural Component of Science in Education": Introduction. *Science & Education*, 18(9), 1101-1103.

## **G. Unpublished work**

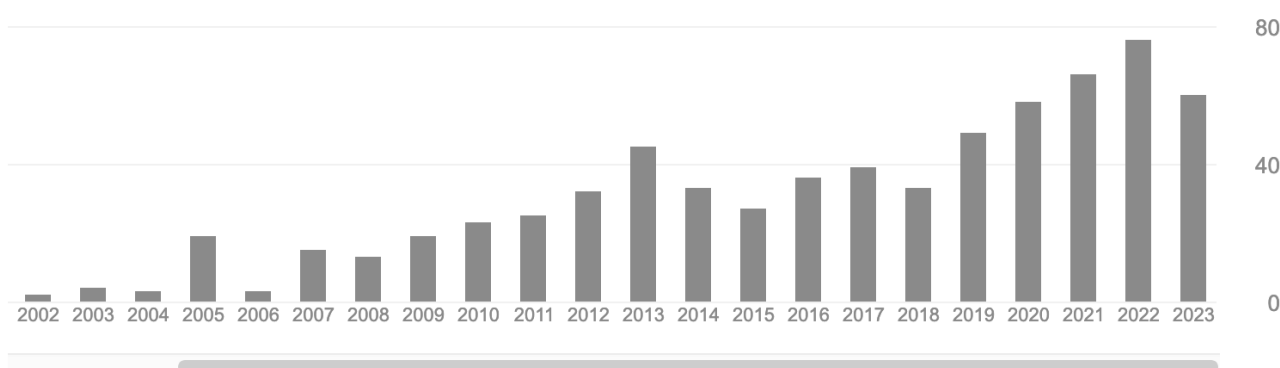
1. **D. Koliopoulos** (1997), Epistemological and didactical dimensions of a curriculum formation concerning the teaching and learning of the concept 'energy': a case study, *Doctoral dissertation*, University of Patras<sup>1</sup> [In Greek].
2. **D. Koliopoulos** (1983), Raisonnements erronées autour de la notion de la pression, *Masters dissertation*, Université Paris 7.

## **H. Educational sites**

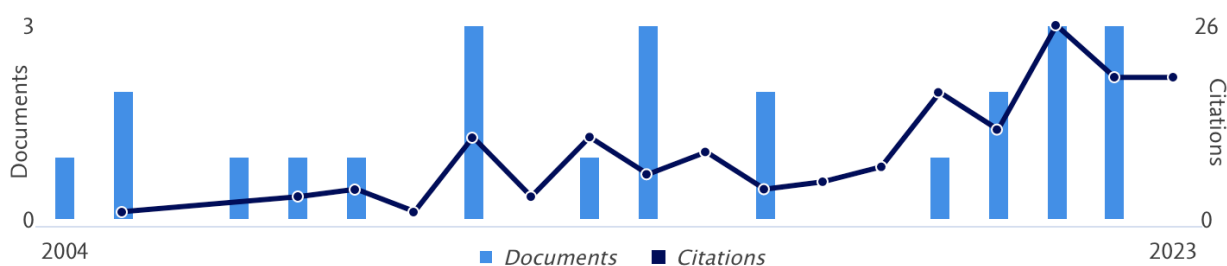
1. 'Energy in education' group (<http://energyeducationen.blogspot.gr/>)

## **I. Citations**

Google citations (30/9/2023) 714 citations, h-index 15, i10-index 22



Scopus citations (30/9/2023) 153 citations, h-index 8



## **FUTURE RESEARCH PLANS**

My future scientific plans are strongly related to the research directions I mentioned above. These plans concern research about the didactical transposition of scientific to school knowledge and development of teaching/training material in the following areas: (a) energy education, (b) archaeology, art and science interdisciplinary educational approach and (c) history and philosophy of science in science teaching. There are three research areas in science education that promotes in a privileged way the cultural and environmental dimension of scientific knowledge. My future research activities will involve both formal and non-formal (activities in science museums/centers, science fairs, field activities etc) forms of science education.

<sup>1</sup> <https://www.esera.org/dimitris-koliopoulos/>