

# Dr. Alexandros Karakasidis

## CURRICULUM VITAE

### PERSONAL INFORMATION

**Name**..... Alexandros Karakasidis  
**Birth date**..... 21/04/1978  
**Birthplace**..... Komotini, Greece

### CONTACT INFORMATION

**E-mail**..... [a.g.karakasidis@gmail.com](mailto:a.g.karakasidis@gmail.com)  
**Contact phone**..... +306972187276  
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**Address**..... T. Oikonomidi 14, Kalamaria, GR55131, Greece

## STUDIES

**Ph.D. in Computer Science**..... September 2015  
School of Science and Technology, Hellenic Open University  
Thesis: Approximate Linkage of Duplicate Records, Data Matching and Privacy.  
Supervisor: Professor Vassilios S. Verykios

**M.Sc. in Computer Science (Information Systems) (8.20 / 10)**..... April 2005  
Computer Science Department, University of Ioannina  
Thesis: ETL Queues for Active Data Warehousing  
Supervisor: Professor Panos Vassiliadis

**B.Sc. in Computer Science (7.13 / 10)** ..... April 2002  
Computer Science Department, University of Ioannina  
Thesis: A multithreaded simulator of IEEE 802.11  
Supervisor: Professor Leandros Tassioulas

## SPOKEN LANGUAGES

**Greek**..... Native

**English**..... Excellent

- **Certificate of Proficiency in English**..... 1995  
University of Michigan
- **Certificate of Proficiency in English**..... 1995  
University of Cambridge

## SCIENTIFIC ACTIVITY

### RESEARCH INTERESTS

#### Responsible Data Management

- Privacy-preserving record linkage
- Data structures for privacy-preserving record linkage
- Bias in record linkage
- Quantitative measures for privacy and bias evaluation

#### Web applications

- Privacy in social networks
- Microservices for web information systems
- Microservices for educational management systems

#### Big data processing

- Big data processing using microservices
- High performance algorithms for privacy-preserving record linkage
- Automation for large scale educational processes

### PARTICIPATION IN RESEARCH PROJECTS

**Kallipos+** ..... 3/2022-12/2022  
“Technologies for processing and analyzing big data”, Co-author. (In progress). NTUA, Greece.

**Human Brain Project (HBP)** ..... 2/2021-1/2022  
SGA3 (Grant Agreement no. 945539), Athens University of Economics and Business, Greece.

**Methods for identifying important communities in evolving social networks.** 9/2019-12/2019  
Basic research program, 6th round.  
Department of Applied Informatics, University of Macedonia, Greece.

**iSocial** ..... 12/2015-09/2016  
Marie Curie Initial Training Network. Experienced Researcher.  
Department of Computer Science, University of Cyprus, Cyprus.

**DBGlobe: A data-centric approach to global computing**.....01/2002-06/2002  
IST-2001-32645, EU Funding. Design of system architecture.  
Department of Computer Science, University of Ioannina, Greece.

### TEACHING

**Laboratory Teaching Staff**..... 2019 – present

#### Postgraduate

- 2022-23:
  - Application Development and Big Data

#### Undergraduate

- Since 2022:
  - Application Development for Mobile Devices – core
- Since 2019:
  - Procedural Programming – core
  - Data Structures – core
- 2019-2020:
  - Databases – core

- Since 2016:
  - Big Data Analytics – elective (2016-2019 as a visiting lecturer)

**Adjunct Lecturer**..... 2019 – 2020  
 Data Science and Machine Learning postgraduate program, Hellenic Open University  
 Teaching of the 2022-2023 full year course "Algorithmic Techniques and Systems for Data Science and Machine Learning".

**Theses Supervision**..... 2020 – present  
 Hellenic Open University

**Adjunct Lecturer**..... 2019 – 2020  
 Computer Science, Hellenic Open University  
 Teaching of the 2019-2020 full year elective course "Distributed Systems".

**Visiting Lecturer**..... 2017 – 2018  
 Department of Electrical & Computer Engineering, Aristotle University of Thessaloniki  
 Teaching of the 2017-2018 fall semester elective course "Databases"

**Visiting Lecturer**..... 2016 – 2017  
 Department of Computer Science and Engineering, University of Ioannina  
 Teaching of the 2016-2017 fall semester elective course "Complex Data Management"

## THESES SUPERVISION

### MSc

- Stylianos Lilis, "Experimental comparison of Private Record Linkage methods." (Defended).
- Ioannis Balasis, "On exploring ways for improving the Fuzzy Vaults method for privacy-preserving record linkage" (Defended).
- Martha Vlachou, "Privacy Preserving Record Linkage using Federated Learning". (Defended).
- Odysseas Tsilingiridis, "Development of a Learning Management System (LMS) based on a Microservices architecture using the MEAN stack" (Defended).

### BSc

- Christina Makri. "Bias in privacy preserving record linkage methods" (Defended).
- Konstantinos Razgelis, "A microservices – based privacy preserving record linkage system" (Defended).
- Orestis – Rafail Nerantzis and Apostolos Tselios. "MI-OPJ: A microservices-based online programming judge" (Defended).
- Konstantinos Manolis, "Big entity resolution in Apache Spark" (Defended).
- Xhino Mulaymeri, "A Fuzzy Vault scheme for approximate privacy-preserving string matching" (Defended).
- Dimitrios Tourgaidis, "A microservices - based system for big data for managing and analyzing streams of orders" (Defended).

## PUBLICATIONS IN JOURNALS

- J01. Damian Eke, Ida E.J. Aasebø, Simisola Akintoye, William Knight, **Alexandros Karakasidis**, Ezequiel Mikulan, Paschal Ochang, George Ogoh, Robert Oostenveld, Andrea Pigorini, Bernd Carsten Stahl, Tonya White, Lyuba Zehl, Pseudonymisation of neuroimages and data protection: Increasing access to data while retaining scientific utility, *Neuroimage: Reports*, Volume 1, Issue 4, 2021, 100053, ISSN 2666-9560.

- J02. **A. Karakasidis**, G. Pallis, M. D. Dikaiakos, Two-Hop Privacy-Preserving Nearest Friend Searches, Knowledge and Information Systems, December 2018, DOI: 10.1007/s10115-018-1313-8, ISSN: 0219-3116.
- J03. **A. Karakasidis**, V. S. Verykios, Secure Blocking + Secure Matching = Secure Record Linkage. Journal of Computing Science and Engineering, Vol. 5, Number 3, September 2011, 223-235.
- J04. V. S. Verykios, **A. Karakasidis**, V. Mitrogiannis, Privacy Preserving Record Linkage Approaches. International Journal of Data Mining, Modeling and Management, Vol. 1, Issue: 2, 2009, 206-221.

## PUBLICATIONS IN CONFERENCE & WORKSHOP PROCEEDINGS

- P01. K. Razgkelis, **A. Karakasidis**. PRES3: Private Record Linkage using Services, Spark and Soundex. The 20th International Conference on Service-Oriented Computing (accepted).
- P02. **A. Karakasidis**, G. Koloniari, Efficient Privacy Preserving Record Linkage at Scale using Apache Spark. The 2022 IEEE International Conference on Big Data (accepted).
- P03. **A. Karakasidis**, G. Koloniari. More Sparking Soundex-based Privacy-Preserving Record Linkage. 2022 International Symposium on Algorithmic Aspects of Cloud Computing (Post proceedings pending)
- P04. O. R. Nerantzis, A. Tselios, **A Karakasidis**, MI-OPJ: A Microservices-based Online Programming Judge. 2021 IEEE International Conference on Big Data (Big Data). (2021), 5969-5971.
- P05. X. Mullaýmeri, **A. Karakasidis**, Using Fuzzy Vaults for Privacy Preserving Record Linkage. DOLAP 2021. (2021), 101-110.
- P06. X. Mullaýmeri, **A. Karakasidis**, A two-party private string matching fuzzy vault scheme. ACM SAC 2021. (2021), 340-343.
- P07. O. Tsilingeridis, **A. Karakasidis**, MILMS: A Microservices-based Learning Management System. 2020 IEEE Conference on Big Data, (2020), 5843-5845.
- P08. D. Tourgaidis, **A. Karakasidis**, Event-centric Microservices for E-states. The 9th International Conference on Electronic Government and the Information Systems Perspective, (2020), 78-88.
- P09. N. Sachpenderis, **A. Karakasidis**, G. Koloniari. Structure and Content based Community Detection in Evolving Social Networks. The 11th International ACM Conference on Management of Digital EcoSystems, (2019), 1-8.
- P10. **A. Karakasidis**, E Pitoura. Identifying Bias in Name Matching Tasks. 22nd International Conference on Extending Database Technology, (2019), 626-629.
- P11. **A. Karakasidis**, G. Koloniari. Phonetics-based Parallel Privacy Preserving Record Linkage. The 12th International Conference on P2P, Parallel, Grid, Cloud and Internet Computing, (2017), 179-190.
- P12. **A. Karakasidis**, G. Koloniari and V.S. Verykios. Privacy Preserving Blocking and Meta-Blocking. Proceedings, Part III, of the European Conference ECML PKDD 2015 on Machine Learning and Knowledge Discovery in Databases, (2015), 232-236.

- P13. **A. Karakasidis**, G. Koloniari and V.S. Verykios. Scalable Blocking for Privacy Preserving Record Linkage. Proceedings of the 21th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, (2015), 527-536.
- P14. **A. Karakasidis**, G. Koloniari and V.S. Verykios. PRIVATEER: A Private Record Linkage Toolkit. Proceedings of the CAiSE 2015 Forum at the 27th International Conference on Advanced Information Systems Engineering, co-located with CAiSE 2015, (2015), 197-204.
- P15. **A. Karakasidis**, V. S. Verykios: A Simulator for Privacy Preserving Record Linkage. Proceedings of the 2nd Mining Humanistic Data Workshop, co-located with Engineering Applications of Neural Networks: 14th International Conference, EANN 2013, Halkidiki, Greece, September 13-16, 2013 (2013), Part II, 164-173.
- P16. **A. Karakasidis**, V. S. Verykios: A Sorted Neighborhood Approach to Multidimensional Privacy-Preserving Blocking. Proceedings of the 2012 IEEE 12th International Conference on Data Mining 2012 PhD Forum, (2012), 937-944.
- P17. **A. Karakasidis**, V. S. Verykios: A Highly Efficient and Secure Multidimensional Blocking Approach For Privacy Preserving Record Linkage. Proceedings of the 2012 IEEE 24th International Conference on Tools with Artificial Intelligence (2012), vol. 01, 428-435.
- P18. **A. Karakasidis**, V. S. Verykios: Reference Table Based k-Anonymous Private Blocking. Proceedings of the 27th Annual ACM Symposium on Applied Computing (2012), 859-864.
- P19. **A. Karakasidis**, V. S. Verykios, P. Christen: Fake Injection Strategies for Private Phonetic Matching. Proceedings of the 6th International Workshop on Data Privacy Management, co-located with the 6th international conference, and 4th international conference on Data Privacy Management and Autonomous Spontaneous Security, (2011), 9-24.
- P20. **A. Karakasidis**, V. S. Verykios: Privacy Preserving Record Linkage Using Phonetic Codes. Proceedings of the 4th Balkan Conference in Informatics, (2009), 101-106.
- P21. **A. Karakasidis**, P. Vassiliadis, E. Pitoura: ETL Queues for Active Data Warehousing. Proceedings of the 2nd International Workshop on Information Quality in Information Systems (IQIS), co-located with SIGMOD 2005, (2005), 28-39.
- P22. **A. Karakasidis**, E. Pitoura: DBGlobe: A Data-Centric Approach to Global Computing. Proceedings of the 2nd International Workshop on Smart Appliances and Wearable Computing (IWSAWC), co-located with the 22nd International Conference on Distributed Computing Systems, (2002), 735-740.

## BOOK CHAPTERS

- B01. A. Papadopoulos, A. Gounaris, G. Koloniari, **A. Karakasidis**: Technologies for processing and analyzing big data. Kallipos+ project. In progress.
- B02. N. Sachpenderis, G. Koloniari, **A. Karakasidis**, COTILES: Leveraging Content and Structure for Evolutionary Community Detection. Transactions on Large-Scale Data-and Knowledge-Centered Systems XLV, 2020, (pp. 56-84). Springer, Berlin, Heidelberg.
- B03. **A. Karakasidis**, G. Koloniari: Private Entity Resolution for Big Data on Apache Spark Using Multiple Phonetic Codes. In Big Data Recommender Systems: Recent trends and advances (2019). IET. ISBN:978-1-78561-975-5, 283-302.
- B04. **A. Karakasidis**, V. S. Verykios: Privacy Preserving Record Linkage. In E-Activity and Intelligent Web Construction: Effects of Social Design Book Series (2011), IGI Global. ISBN:1615208712, 22-34.

## OTHERS

001. **A. Karakasidis**, E Pitoura. Identifying Bias in Name Matching Tasks. Hellenic Data Management Symposium (2019).
002. **A. Karakasidis**, G. Pallis, M. D. Dikaiakos, Two-Hop Privacy-Preserving Nearest Friend Searches, Hellenic Data Management Symposium (2019).
003. **A. Karakasidis**, G. Koloniari, V.S. Verykios: Scalable Blocking for Privacy Preserving Record Linkage. Hellenic Data Management Symposium (2016).

## REFERENCES

More than 500 citations, according to Google scholar.

## COLLOQUIUMS

- ATHENA Research Center** ..... 22/2/2022  
Methods for Preserving Record Linkage
- University of Southern Denmark** ..... 17/3/2016  
Speeding up Privacy Preserving Record Linkage
- University of Cyprus** ..... 3/3/2016  
Scalable Blocking for Privacy Preserving Record Linkage

## REVIEWER

- ECML-PKDD 2022 (External / Volunteered)
- VLDB Journal (External / Invited)
- Journal of Systems and Software (External / Invited)
- KDD 2021, 2022 (External / Invited)
- IEEE Access (External / Invited)
- IEEE Internet Computing (External / Invited)
- Computing Journal (External / Invited)
- CCGRID 2016 (External / Invited)
- ICDM 2015 (External / Invited)
- Knowledge and Information Systems Journal (Regular until 2018)
- Information Journal (External/Invited)

## OTHER PROFESSIONAL ACTIVITY

- ICT Teacher** ..... 2006-2019  
Secondary education. Subjects: Computer programming, computer architecture and computer applications. Head of Rodopi center for guidance & advisory (2012-2015).
- ICT Instructor**..... 2012-2013  
Hellenic Police Academy. Subjects: Basic computer and office applications use.
- Practical Teaching Supervisor**..... 2012-2013  
Higher school of pedagogical and technological education. Supervision of teaching trainees.
- Trainer**..... Since 2008

National School of Public Administration & Local Government. Subjects: Content management systems programming and administration, web programming using open source tools.

**Trainer**..... 2010  
Institute of Continuous Adult Education. Adult training in basic ICT skills. Usage of office applications

**Trainer**..... 2008  
Hellenic Ministry of Education. Computer science instructors training. Subjects: Databases, Java programming, web programming.

**Trainer**..... 2007  
Institute of Continuous Adult Education. Adult training in basic ICT skills. Usage of office applications

**Scientific Associate**..... 01/2006-07/2006  
Network Operations Center, University of Ioannina. On-line training for school teachers in the area of responsibility of the University of Ioannina.

**Scientific Associate**..... 06/2002-01/2005  
Central Library, University of Ioannina. Design, building and maintenance of the electronic portal and web services of the library.

**Scientific Associate**..... 01/2002-06/2002  
Department of Computer Science, University of Ioannina. Design and building of DBGlobe system index.

**Internship**..... 01/2002-06/2002  
Department of Computer Science, University of Ioannina. Design and building of DBGlobe system index.

## ATTENDED TRAININGS

**Open and Distance Education**..... 2022  
Organizer: Hellenic Open University  
Duration: 20/6/2022-4/9/2022

**3rd Keystone Training School on Keyword Search in Big Linked Data**..... 2017  
Organizer: COST Action IC1302, TU Wien  
Duration: 21-25/8/2017

**YouthPass Learning Agora**..... 2015  
Organizer: French Erasmus+ Youth National Agency  
Duration: 12-16/5/2015

**Digitalized Tools for Career Guidance – New Potentials and Limitations**..... 2015  
Organizer: National Organization for the Certification of Qualifications and Vocational Guidance  
Duration: 10-12/3/2015

**Erasmus+ Youth Seminar**..... 2014  
Organizer: Hellenic Institute of Youth and Lifelong Learning (INEDIVIM). Seminar on creating projects for the Erasmus+ program.

**Erasmus+ Seminar**..... 2014  
Organizer: National Scholarships Foundation (IKY). Seminar on the potentials of the Erasmus+ program.

**Project management for cross-cultural exchange projects in Europe**..... 2012

Organizer: Ifel Institut. In-service training scholarship for authoring and managing European school cooperation projects.

**Comenius Partnerships – helping schools team up across Europe**.....2012  
Organizer: The European Commission. Good practices for school co-operations in European projects.

**Windows Server 2003 Administration**.....2008  
Organizer: Hellenic Ministry of Interior

**Trainers training in e-Government**.....2008  
Organizer: Hellenic Ministry of Interior. Training on ICT-based processes for e-government.

**EBSCOhost: Research Databases Training Sessions**.....2004  
Organizer: University of Ioannina

**The 2002 Lectures in Computer Science**.....2002  
FORTH-CTI, The Onassis Foundation. Reducing information overload through data warehousing and data mining.

**Seminar in Data Warehouses**.....2002  
NTUA – University of Ioannina, Introduction to data warehouses.