

Europass curriculum vitae

Personal information

Surname(s) / First name(s) **Markides Christos**
 Telephone(s) (357) 22431355 Ext. 46124
 Fax(es) (357) 22438234
 E-mail(s) c.markides@frederick.ac.cy, cmarkides@cmarkides.info
 Website(s) http://staff.fit.ac.cy/com.mc/, http://www.cmarkides.info
 Nationality(-ies) Cypriot
 Marital status Married (3 children)

Education

Dates Jan 2007 – 2014
 Title of qualification awarded **PhD Information Engineering**
 Doctoral Thesis Implementation of the Finite Difference Time Domain Algorithm for the Analysis of Terahertz Waves
 Name of awarding institution City University, London, UK
 Key features Design, characterization and optimization of devices at Terahertz frequencies using the Finite Difference Time Domain Method for sensors, devices, waveguides, optoelectronic systems, and photonic devices.

Dates Sep 2001 – Sep 2002
 Title of qualification awarded **MSc (Distinction) Engineering and Information Sciences**
 Mater Thesis Investigation of hybrid /drilled multilayer Interference filters for the 15-35 μ m band
 Name of awarding institution University of Reading, Computer Science Department, Reading, UK
 Key features Research MSc: Theoretical analysis, and implementation of the Method of Moments for the characterisation of a thin conducting screen perforated periodically with circular apertures (Frequency Selective Surfaces – FSS). Taught modules on UNIX, E-Commerce, Management & Marketing, and Linear Algebra (electives).

Dates Sep 1996 – June 1999
 Title of qualification awarded **BSc (Honors) in Computer Science and Cybernetics**
 BSc Thesis Ant Evolutionary Algorithms for Molecular Confirmation Problems
 Name of awarding institution University of Reading, Computer Science Department, Reading, UK
 Key features Joint degree programme with emphasis on the use of computers of all types in the control and analysis of systems. The Cybernetics modules give a basic grounding in control, measurement and electronics. The Computer Science courses cover computer architecture and software engineering. The programme also covered topics on artificial intelligence, neural networks, vision and robotics.

Academic Profile

Work experience

Dates	Feb 2007 – Present
Employer Name	Frederick University
Occupation or position(s) held	BSc Computer Science Programme Coordinator (Nicosia) Special Teaching Staff, Computer Science and Engineering Department Departmental Erasmus Coordinator (Computer Science and Engineering) Project Coordinator
Main activities and responsibilities	As a member of the Special Teaching Staff my teaching is focused on Programming, Data Structures, Operating Systems, Systems Programming, Database Management, Advanced Database Systems, Computer Graphics, Big Data and Analytics, Digital Logic for Computers, Computer Engineering Practice, Computer Engineering Technologies, Public Speech and Presentation, Web Programming, Computer Ethics, and Technical Report Writing. I am a member of the Computer Science and Engineering Department Committee, and a member of the School of Engineering and Applied Sciences. I have served two terms as a member of the Senate. As an Erasmus coordinator I promote student and faculty mobility under the Erasmus and Socrates programmes. As a project coordinator I organise and allocate students' projects as well as providing information regarding projects (reports, presentations). Since 2009, I have supervised 34 students in Bachelors and 4 in Masters Programmes. In terms of Administration I deal with Departmental student matters (registration, transfers, timetable, etc.), I also maintain the Computer Science archive and run the tutoring system. Furthermore, I organise the preparatory orientation presentation for the CIS Services and deliver public schools presentations. I served as the STS representative to the School of Engineering and Applied Sciences and I represent the Computer Science and Engineering Department to the School's industrial committee. I am currently serving as the Computer Science Programme Coordinator. I am currently involved in three (3) Erasmus Mundus Programmes. I have also participated in the preparation of the accreditation material for Frederick University and during the accreditation process.
Dates	Oct 2002 – Jan 2007
Employer Name	Frederick Institute of Technology
Occupation or position(s) held	Research Associate Computer Science and Engineering Department Instructor in Computer Science Dept. BSc/Diploma Computer Science Administration Erasmus Coordinator (Computer Science and Engineering) Project Coordinator
Main activities and responsibilities	As an instructor my teaching is focused on: Programming, Operating Systems, Databases, Data Communications, Local Area Networks, Programming, Digital Logic for Computers, Assembly Programming, Systems Analysis, Linear Algebra with MATLAB, Computer Programming for Engineers, and Computer Application Packages. As an Erasmus coordinator I promote student and faculty mobility under the Erasmus and Socrates programmes. As a project coordinator I organise and allocate students' projects as well as providing information regarding projects (reports, presentations). In terms of Administration I deal with Departmental student matters (registration, transfers, timetable, etc.), I also maintain the Computer Science archive and run the tutoring system. I participated in 4 accreditations of the Bachelor and Diploma Programmes of Study in Nicosia and Limassol.
Dates	Jan 2003
Employer Name	National Telecommunications and Post Commission, Greece
Occupation or position(s) held	Software Design and Development
Main activities and responsibilities	New numbering plan conversion program for address book contacts
Dates	May 2002
Employer Name	Serono Hellas (Merck Biopharma) AE, Greece
Occupation or position(s) held	Software Design and Development
Main activities and responsibilities	CRM Information System Development and Support

Professional Memberships

Member – IEEE (since 2003)
Member – ACM (since 2003)
Member – SPIE (since 2012)
Member – OSA (since 2013)

Awards

IBM NoSQL and Database-as-a-service, 2018
IBM Hadoop Foundations, 2017
IBM Big Data Fundamentals, 2016
CISCO IT Essentials Instructor, 2011
CISCO IoT Instructor, 2017
LPI/CISCO Linux Essentials Instructor, 2014
FIT Certificate of Appreciation in Research and Development, 2003 – 2004
FIT Certificate of Appreciation in Accreditation Process, 2006

Service to the Institute

Kingston University MBA Programme (E-Commerce)
Disciplinary Committee, Computer Services Department,
Services to the Frederick University Steering Committee:
Collecting architecture plans, deriving office spaces, lab spaces, lecture room spaces, parking places, designing plans for use in presentations, gathering the entire infrastructure data of the university, design and implementation of the Frederick University electronic archives.

Computer Science and Engineering Erasmus Coordinator

Erasmus Programmes:

- 1) Intensive Programme in Improving Security in ICT (2004 – 2007)
- 2) Intensive Programme in Secure Web Applications (2009 – 2012)
- 3) Erasmus Mundus: StrongTies, INTACT, and LEADERS

Erasmus Mundus Projects

Duration, Funding Ag. and Funding
Title

2011 – 2014: Erasmus Mundus Action 2, Group A & B – Asia, Total Funding: EUR 1 991 850

STRONG-TIES: Strengthening Training and Research Through Networking and Globalization of Teaching in Engineering Studies

Role and Contribution

Coordinator: City University of London, UK, Prof. B. M. A. Rahman

Frederick University coordination with Dr Christos Themistos (Primary Coordinator) preparation of instructions for visiting Frederick University. Administering of students for receiving Cyprus visa, and student registration process.

Duration, Funding Ag. and Funding
Title

2013 – 2017: Erasmus Mundus Action 2, Group A & B – Asia, Total Funding: EUR 2 967 700

INTACT - It's Time for CollaboratioN TowArDs Close CooperaTion

Role and Contribution

Coordinator: Frederick University, Dr Christos Themistos

Frederick University coordination, E-Consort platform setup, preparation of application process, lists of eligible candidates, preparation for selection process and distribution of candidates' evaluation. Preparation for kick-off meetings, preparation of evaluation lists (score aggregates) and preliminary selection, preparation and finalisation of lists for selected candidates, distribution of lists of eligible candidates to EU universities and Asia universities.

Duration, Funding Ag. and Funding
Title

2014 – 2018: Erasmus Mundus Action 2, Group A & B – Asia, Total Funding: EUR 2 702 050

LEADERS - Leading Mobility between Europe and Asia in Developing Engineering Education and Research

Role and Contribution

Coordinator: City University of London, UK, Prof. B. M. A. Rahman

Frederick University coordination with Dr Christos Themistos (Primary Coordinator), aide to City University for the E-Consort platform setup, preparation of application process, lists of eligible candidates, preparation for selection process and distribution of candidates' evaluation. Preparation for kick-off meetings, preparation of evaluation lists (scores aggregates) and preliminary selection, preparation and finalisation of lists for selected candidates, distribution of candidates to EU universities.

Research Projects

Duration, Funding Ag. and Funding	2014 – 2020: Επιχειρησιακό Πρόγραμμα – Αειφόρος Ανάπτυξη και Ανταγωνιστικότητα, Ανάπτυξη Καινοτόμων Προϊόντων και Διεργασιών. Total Funding: EUR 74 687
Title	HIPPOACTIVE – Προηγμένος Εξομοιωτής Αλόγου για Ιπποθεραπεία
Role and Contribution	Researcher: Responsible for the analysis, development and implementation of a Stewart platform 3D simulator using MATLAB.
Duration, Funding Ag. and Funding	2004 – 2007: Research Promotion Foundation. Total Funding: CYP 60,000
Title	Novel Technologies for Planning and Scheduling in the Process Industry of SMEs
Role and Contribution	Researcher: Responsible for the analysis, development and testing of software.
Duration, Funding Ag. and Funding	2004 – 2006: Research Promotion Foundation. Total Funding: CYP 180 949
Title	Improvement of the extrudability of the AA6063 aluminium alloy using coated dies with new PVD coatings.
Role and Contribution	Researcher: Responsible for the development of simulations.
Duration, Funding Ag. and Funding	2004 – 2006: Research Promotion Foundation.
Title	Data Acquisition and Control of a hydrogen absorption system
Role and Contribution	Researcher: Responsible for the analysis, development and testing of software to control instrumentation and measurements for the activation, absorption and desorption process of hydrogen, using a PIC microcontroller.
Duration, Funding Ag. and Funding	2004 – 2006: Research Promotion Foundation. Total Funding: CYP 45 000
Title	The role of representations in primary and secondary mathematics education.
Role and Contribution	Researcher: Analysis, design, implementation and testing of an information system with a web-based front end for solving mathematical problems in primary schools around the country.
Duration, Funding Ag. and Funding	2006 – 2007: European Union
Title	Country of Origin Information (COI)
Role and Contribution	Researcher: Analysis, design, implementation and testing of a database and on-line information system for determining the status of COI for asylum seekers in Cyprus and the development of a website.
Duration, Funding Ag. and Funding	2009 – 2013: Research Promotion Foundation
Title	Development of nano scale-optic and microfluidic devices using femtosecond laser
Role and Contribution	Researcher: Design and characterisation of plasmonic waveguides at Terahertz frequencies.

Research Project Proposals

Title: Smart Data in Context (SmartData.io)
Role: Researcher. **Coordinator:** Frederick Research Center (FRC)
Partners: University of Cyprus (UCY), FRC, Cyprus University of Technology (CUT), MTN, Cyprus Energy Association (CEA), Agricultural Research Institute (ARI), Karlsruhe Institute of Technology (KIT) – Smart Data Innovation Lab (SDIL), Dublin City University (DCU).
Submitted: 2017, (**pending**)
Call: RPF RESTART 2016 – 2020/Infrastructures

Title: CloudScanner (CS)
Role: Researcher. **Core Partner:** Frederick Research Center.
Partners: BDigital, IBSCY, Frederick Research Center (FRC), and the University of Cyprus (UCY).
Submitted: 2016, (**passed**, not funded)
Call: RPF RESTART 2016 – 2020 /Enterprises

Title: iLife –Troodos National Forest Park: Promoting natural values and Ecosystem Services
Role: Researcher. **Coordinator:** Department of Forestry, Ministry of Agriculture.
Partners: Frederick University - Cyprus (Applicant Coordinator), Game and Fauna Service – Cyprus, Terra Cypria (NGO).
Submitted: 2016, (**funded**), Total Funding: EUR 1 276 876
Call: European Union – LIFE+

Title: Improving the capacity of remote protected areas to detect, estimate and effectively combat environmental crime by developing novel real-time warning systems
Role: Researcher. **Coordinator:** Game and Fauna Service, Ministry of Agriculture
Partners: Frederick University - Cyprus (Applicant Coordinator), Department of Forestry – Cyprus, Terra Cypria (NGO) – Cyprus, Bulgarian Biodiversity Foundation (NGO) – Bulgaria, and Hunting Federation of Macedonia and Thrace (NGO) – Greece.
Submitted: 2017, (**pending**), Total Funding: 747,902
Call: EU Internal Security Fund – Police, ISFP-2017-AG-ENV; 821601

Title: Poaching Prevention and Detection using Smart Autonomous Real-time Devices
Role: Researcher. **Coordinator:** Game and Fauna Service, Ministry of Agriculture
Partners: Frederick University - Cyprus (Applicant Coordinator), Game and Fauna Service – Cyprus, Terra Cypria (NGO) – Cyprus, Bulgarian Biodiversity Foundation (NGO) – Bulgaria, and Hunting Federation of Macedonia and Thrace (NGO) – Greece.
Submitted: 2015, (**passed**, not funded)
Call: EU Internal Security Fund – Police, HOME/2014/ISFP/AG/EFCE

Publications

PhD Dissertation Implementation of the Finite Difference Time Domain Algorithm for the Analysis of Terahertz Waves, City University London, 2014.

MSc Dissertation Investigation of hybrid /drilled multilayer Interference filters for the 15-35µm band, Department of Cybernetics, University of Reading, 2002.

Refereed Journal Publications

- [1] **C. Markides**, C. Themistos, H. Tanvir, B. M. A. Rahman, K. T. V. Grattan, "*Multimode Interference 3 dB Splitters in Hollow Core Metallic Waveguides for Low-Loss THz Wave Transmission*," Selected Topics in Quantum Electronics, IEEE Journal of , vol.19, no.1, pp.8500606, Jan.-Feb. 2013.
- [2] B. M. A. Rahman, **C. Markides**, M. Uthman, A. Quadir, N. Kejalakshmy, and C. Themistos, "*Characterization of low-loss waveguides and devices for terahertz radiation*", Optical Engineering: Special Section Paper Terahertz Physics and Applications, vol. 53(3), pp. 031210-031210, 2014.
- [3] B. M. A. Rahman, C. Themistos, H. Tanvir, M. Uthman, A. Quadir, and **C. Markides**, "Emergence of T-Rays: Design of low-loss waveguides and devices", Int. Journal of Microwave and Optical Technology, vol. 9, No. 1. Jan. 2014.

Refereed Conference Publications

- [1] B. M. A. Rahman, H. Tanvir, M. Uthman, A. Quadir, K. T. V. Grattan, **C. Markides**, and C. Themistos, "*Emergence of THz technologies and design and optimisation of low-loss waveguides and devices*" 8th International Conference on Electrical and Computer Engineering, pp. 389-393, Dhaka, 2014.
- [2] B. M. A. Rahman, C. Themistos, H. Tanvir, M. Uthman, A. Quadir, and **C. Markides**, "*Low-loss terahertz waveguides and devices*," Int. Conf. on Fibre Optics and Photonics, Kharagpur, India, 2014.
- [3] Themistos, C., Rahman, B. M., **Markides, C.**, Uthman, M., Quadir, A. & Kejalakshmy, N. (2014). "Characterization of graphene-based devices for THz Systems", Terahertz Physics, Devices, and Systems VIII: Advanced Applications in Industry and Defense, vol. 9102, SPIE. ISBN 9781628410396.
- [4] B. M. A. Rahman, C. Themistos, H. Tanvir, M. Uthman, A. Quadir, and **C. Markides**, " Low-loss waveguides for THz guidance and devices", Proc. SPIE 8624, Terahertz, RF, Millimeter, and Submillimeter-Wave Technology and Applications VI, 862414, USA, 2013.

- [5] B. M. A. Rahman, C. Themistos, H. Tanvir, M. Uthman, A. Quadir, and **C. Markides**, "Low-loss waveguides for THz guidance and devices," Proc. SPIE 8624, Terahertz, RF, Millimeter, and Submillimeter-Wave Technology and Applications VI, pp. 862414-862414-6, California, USA, 2013.
- [6] B. M. A. Rahman, M. Uthman, A. Quadir, N. Kejalakshmy, **C. Markides**, and C. Themistos, "Low-loss waveguides and devices for compact THz systems," Terahertz Physics, Devices, and Systems VII: Advanced Applications in Industry and Defence, pp. 87160R-87160R-8, Maryland, USA, 2013.
- [7] **C. Markides**, C. Viphavakit, C. Themistos, M. Komodromos, K. Kalli, A. Quadir, A. Rahman, "Dispersion characteristics of plasmonic waveguides for THz waves", Proc. SPIE, Modelling and Numerical Analysis, Prague, April 2013.
- [8] B. M. A. Rahman, C. Themistos, A. Quadir, M. Uthman, **C. Markides**, H. Tanvir and K. T. V. Grattan, "Design Optimization of Low-loss Waveguides and Devices for THz Systems", Infrared and Optoelectronics: Materials and Devices, Chicago, 2012.
- [9] C. Themistos, A. Quadir, **C. Markides**, H. Tanvir, and B. M. A. Rahman, "Rigorous characterization of surface plasmonic waveguides and guided-wave devices for THz systems", Int. Conf. on Metamaterials, Photonic Crystals and Plasmonics, UAE, 2013.
- [10] C. Themistos, K. Kalli, M. Komodromos, **C. Markides**, A. Quadir ; B. M. Azizur Rahman, K. T. V. Grattan, "Low-loss multimode interference couplers for terahertz waves," Proc. SPIE 8426, Microstructured and Specialty Optical Fibres, 84260X, Brussels, June , 2012.
- [11] C. Themistos, **C. Markides**, B.M.A. Rahman, K.T.V. Grattan, "Characterization of microstrips for THz waves", IEEE EDSSC, Bangkok, 2012.
- [12] B. M. A. Rahman, K. T. Grattan C. Themistos, **C. Markides**, "Design Optimization of Low-loss Waveguides and Devices for THz Systems," in International Conference on Fibre Optics and Photonics, p. M1A.1, Chennai, India, 2012.
- [13] Massalas M., Konstantinidis A., Achilleos A., **Markides C.**, and Papadopoulos G., "CrODAgator: An Open Access CrowdSensing Platform as a Service", 5th CASPer Workshop 2018, 16th IEEE International Conference on Pervasive Computing and Communications, PerCom, Athens, 2018.
- [14] Achilleos A., Georgiou K., **Markides C.**, Konstantinidis A. and Papadopoulos G., "Adaptive Runtime Middleware: Everything as a Service", 9th International Conference on Computational Collective Intelligence (ICCCI '17), September, 2017.

Research Interests

Positions	Honorary Visiting Research Fellow, City University of London, UK (2016 – 2019)
Academic Domain Research Interests	Integrating information from heterogeneous data sources, Data Governance, Operational Data Store (ODS), and Extract, Transform and Load (ETL) Big Data and Data Analytics, Hadoop Framework and foundation core components, NoSQL databases, APIs, HBase, HIVE, CouchDB, IBM Cloudant, ZooKeeper, PIG, Data Analytics tools, R Programming Language. Internet-of-Things (IoT) using embedded systems, and microcontroller programming for real-world applications Integration of IoT with Cloud-based Information Systems and Smartphone Applications
PhD Research Interests	Investigation and characterisation of waveguides at terahertz frequencies Development and application of the Finite-Difference Time-Domain method for numerical analysis Simulation of terahertz and photonic waveguide devices such as microstrips as well as multimode interference-based devices Surface plasmon analysis for the terahertz regime Graphene-based devices in terahertz science and technology

Conferences

Attended ACM Symposium on Applied Computing, SAC 2004, March 14-17, 2004, Nicosia, Cyprus.
Presented SPIE Photonics Europe, 16 - 19 April 2012, Brussels, Belgium.

Professional Activities

Responsible for developing the syllabi for the operating systems courses (2) and computer application packages (1) for the Post-Secondary Studies Curriculum for Communication and Network Technicians – Cyprus Ministry of Education, 2012-2013.

Responsible for developing the syllabi for the operating systems courses (1), databases (1) and web design (2) for the Technical Schools (Μέση Τεχνική και Επαγγελματική Εκπαίδευση) Curriculum for Computers, Networks, and Communications (Ηλεκτρονικών Υπολογιστών, Δικτύων και Επικοινωνιών)– Cyprus Ministry of Education, 2017-2018.

International Journal Peer Review IEEE Photonics Technology Letters,
International Journal on Information Technologies and Security (member of editorial board),
Institute of Physics (IOP),
Optics Communications – Elsevier,
Applied Computational Electromagnetic Society (ACES)

International Conference Peer Review ACES, Applied Computational Electromagnetic Society Conference 2015, Virginia, USA.

Organisational Skills

Frederick University Organise student registration and subject availability every semester
Timetable development for the Computer Science students
Organisation of Final Year Projects presentations, deadlines, and submission of reports
Monitoring Computer Science students study paths
Erasmus Students mobility and monitoring (incoming and outgoing)
Student supervision in the Mobile Devices Laboratory and Networks Laboratory
Member of School Council and the Industrial Liaison committee of the School
Member of the Alumni and Industrial Relation Departmental Committee
Analysis and design of the Frederick University Alumni system and proposal of the Frederick University Alumni Committee and regulations
Development of syllabi at Department and School level and coordinating between Departments
Development of the new BSc Computer Science Programme of Study (POS)
Coordination and Organisation of the School of Engineering Careers Fair 2017, and 2018
Organisation and preparation of focus groups with the industry for the Departmental Quality Assurance evaluation.

Erasmus Mundus Organised Selection Meeting for (EU and Asian Universities):
1) Erasmus Mundus StrongTIES (Call 3) – Nicosia, Cyprus (2014)
2) Erasmus Mundus INTACT (Call 1, and 2) – Nicosia, Cyprus (2014, 2015)
3) Erasmus Mundus LEADERS (Call 1) – Nicosia, Cyprus (2015)

Skills and Competences

Computer hardware, and computer home/office/industry networks design and implementation
Cloud-based infrastructure and solutions
Programming languages: Assembly, C, C++, C#, Java, Visual Basic/C/C++/C#, Python, R, Miranda, Modula 2, Pascal, POP11, MATLAB, Mathematica, Mathcad, VRML
Scripting languages: JavaScript, VBScript, PHP, AJAX, HTML, CSS, ASPX, Bootstrap, JQuery
Database design, DBMS, and NoSQL: Oracle, MySQL, SQL server, SQLite, Hadoop, Cloudant
Microcontrollers and embedded systems, Arduino, Raspberry PI, Beagle Board
Operating systems administration, and systems programming on UNIX and Windows
Web design and development (static, dynamic, interactive, CMS, MVC)
Presentation skills, technical report writing, public relations, and social skills
Television appearance on Capital TV (2015) – Imagine Cup Competition 2015 – S.E.C.S Project.