


# Dr. Christos D. Nikolopoulos

HELLENIC MEDITERRANEAN UNIVERSITY

School of Engineering, Dept. of Electronic Engineering, 3 Romanou Str., Chalepa, Chania, Crete, Greece, GR-73133  
✉ [cnikolo@hmu.gr](mailto:cnikolo@hmu.gr), [chris.d.nikolopoulos@gmail.com](mailto:chris.d.nikolopoulos@gmail.com) | <http://hmu.gr/ee> |  [chnikolo](#)

NATIONAL TECHNICAL UNIVERSITY OF ATHENS

School of Electrical & Computing Engineering, 9 Iroon Polytechniou str., Zografou, Attica, Greece, GR-15773  
☎ +306977599394, +302107721829 | ✉ [cnikolo@mail.ntua.gr](mailto:cnikolo@mail.ntua.gr) |  [wldcl.ece.ntua.gr](http://wldcl.ece.ntua.gr)

 [HTTP://ORCID.ORG/0000-0003-1344-4666](http://ORCID.ORG/0000-0003-1344-4666),  [C. NIKOLOPOULOS](#),  [Scopus](#) [C. D. NIKOLOPOULOS](#)



## PERSONAL SUMMARY

---

I recently act as an Assistant Professor in the Department of Electronic Engineering of the Hellenic Mediterranean University in addition to my long-standing affiliation as a Research Associate in Wireless & Long-Distance Communication Lab., Department of Electrical & Computer Engineering of the National Technical University of Athens. Also, I am an outsourcing EMC Consultant at EMTech SPACE P.C. to various projects of ESA's ITT. I received the B.Sc. & M.Sc. degree in Physics and Informatics from the National & Kapodistrian University of Athens (UOA), and the PhD degree from the National Technical University of Athens (NTUA) in 2014.

The main research interests are in the field of Electromagnetic Compatibility, Inverse Scattering, Antenna Design & Propagation. My recent research focused on modelling and measuring techniques of electromagnetic emissions from space mission's equipment. Past positions include Hellenic Telecommunications Organization and various research projects in collaboration with National and Kapodistrian University of Athens, National Technical University of Athens, European Research Agencies and the Hellenic Ministry of Finance.

## PROFESSIONAL & RESEARCH EXPERIENCE

---

### Hellenic Mediterranean University

School of Engineering, Department of Electronic Engineering.  
ASSISTANT PROFESSOR

*Crete, Greece*  
*September 2020 — present*

### Hellenic Mediterranean University

School of Engineering, Department of Electronic Engineering.  
ADJUNCT LECTURER - RESEARCH ASSOCIATE

*Crete, Greece*  
*September 2018 — August 2020*

### National Technical University of Athens

School of Electrical and Computer Engineering, Wireless & Long Distance Communications Lab.  
RESEARCH ASSOCIATE

*Athens, Greece*  
*March 2008 — present*

### EMTech SPACE P.C.

SENIOR EMC ENGINEER/CONSULTANT

*Athens, Greece*  
*April 2016 — August 2019*

### National & Kapodistrian University of Athens

School of Sciences, Department of Physics.  
RESEARCH ASSOCIATE

*Athens, Greece*  
*March 2016 — August 2016*

### Hellenic Telecommunications Organization S.A. (O.T.E.)

General Topics in Technology Laboratories and Mobile Radio Communications  
RF ENGINEER

*Athens, Greece*  
*April 2004 – June 2004*

## EDUCATION

---

### National Technical University of Athens

School of Electrical and Computer Engineering

PH.D. IN ELECTRICAL & COMPUTER ENGINEERING

Dissertation Title: "Smart Antennas Technologies & Applications"

Thesis Advisor: Prof. C. N. Capsalis

*Athens, Greece*

*March 2014*

### National & Kapodistrian University of Athens

School of Sciences, Department of Physics / Informatics & Telecommunications

M.ENG. IN TELECOM ENGINEERING

Thesis Title: DVB-T for Handheld Devices

Thesis Advisor: Prof. I. G. Tigelis

*Athens, Greece*

*September 2012*

### National & Kapodistrian University of Athens

School of Sciences, Department of Physics

B.SC. IN PHYSICS SCIENCES

Thesis Title: Evaluation of Wireless Standards 802.11 a, b, g.

Thesis Advisor: Prof. G. Tombras

*Athens, Greece*

*September 2006*

## ACADEMIC HONORS, GRANTS AND AWARDS

---

### Post Doc Research Grant

Research Proposal: Smart Microwave Devices of Nanomaterials with Application in Bodycentric Communications and the Internet of Things (MWNanoWearIoT) – **Project Fund: 45.500€**

*NSRF 2014-2020*

*Athens, Greece*

*2019*

### Post Doc Research Grant

Research Proposal: Modeling Electromagnetic Emissions of Space Equipment for EMC and Cleanliness Purposes (acting as Prime Investigator & Scientific Supervisor) – **Project Fund: 190.000€**

*ELIDEK*

*Athens, Greece*

*2018*

### NVIDIA GPU Grant

Support the proposed Research (Modeling Methods for Electro-Magnetic Compatibility and Cleanliness purposes of space mission's critical equipment) in the field of Algorithms & Numerical Techniques, Material Science, and Physics. – **Project Fund: 5.000€**

*NVIDIA Corporation*

*Austin, Texas*

*2017*

### Thomaidion Award for Scientific Publications

National Technical University of Athens

(C. D. Nikolopoulos, A. T. Baklezos, C. N. Capsalis, (2016). Reconfigurable Antennas: Theory and Techniques – A Survey. In M. Matin (Ed.), Wideband, Multiband, and Smart Reconfigurable Antennas for Modern Wireless Communications (pp. 203-236). Hershey, PA: Information Science Reference. doi:10.4018/978-1-4666-8645-8.ch007)

*Athens, Greece*

*2015*

### Thomaidion Award for Scientific Publications

National Technical University of Athens

(Nikolopoulos, C. D., & Capsalis, C. N. (2014). Hybrid method of moments-induced EMF method for analyzing multi-element planar inverted F antenna arrays. *Microwaves, Antennas & Propagation, IET*, 9(7), 657-663.)

*Athens, Greece*

*2014*

### Thomaidion Award for Scientific Publications

National Technical University of Athens

(C. D. Nikolopoulos and C. N. Capsalis, "A Novel Antenna System for Body Temperature Change Detection Appropriate for Multi-channel Microwave Radiometry", *Progress In Electromagnetic Research (PIER) M*, vol. 33, p.197-209, 2013)

*Athens, Greece*

*2013*

### Thomaidion Award for Scientific Publications

National Technical University of Athens

*Athens, Greece*

*2012*

(C. D. Nikolopoulos and C. N. Capsalis, "A small broadband switched-beam cross Pifa for mobile WiMAX applications", *Journal of Electromagnetic Waves and Applications- JEMWA*, vol. 26, Issue 17-18, pp. 2418-2425, 2012)

#### Thomaidion Award for Scientific Publications

National Technical University of Athens

(C. D. Nikolopoulos, C. I. Tsitouri, T. D. Dimousios and C. N. Capsalis, "A Compact Single Feed, Low Cost Broadband Switched-Beam Antenna for Mobile Wimax Applications," *PIERS*, 85-88, 2011)

Athens, Greece

2011

## PUBLICATIONS & OTHER WRITINGS

---

### Peer Reviewed Journal Articles

- [J20] A. T. Baklezos, **C. D. Nikolopoulos**, T. N. Kapetanakis, I. O. Vardiambasis, C. N. Capsalis, "A Cooperative Method Based on Joint Electric and Magnetic Cleanliness for Early Space Platform EMC Assessments," *IEEE Access*, 2020 (under review)
- [J19] A.E. Kaprana, I. O. Vardiambasis, T. N. Kapetanakis, M. P. Ioannidou, **C. D. Nikolopoulos** and G. E. Lyrionis, "Experimental Study of Potential Adverse Effects on the Auditory System of Rabbits Exposed to GSM-1800 Radiation", *International Journal of Radiation Biology*, DOI: 10.1080/09553002.2021.1859152
- [J18] I. O. Vardiambasis, T. N. Kapetanakis, **C. D. Nikolopoulos**, T. Kieu Trang, T. Tsubota, R. Keyikoglu, A. Khataee, and D. Kalderis, "Hydrochars as emerging biofuels: recent advances and application of artificial neural networks for the prediction of heating values," *Energies*, 13(17), 4572, 2020. doi.org/10.3390/en13174572
- [J17] **C. D. Nikolopoulos**, A. T. Baklezos and C. N. Capsalis, "On Achieving Spacecraft Level Magnetic Cleanliness with Proper Equipment Ordinance of DC and ELF Magnetic Sources", *IEEE Transactions on Electromagnetic Compatibility*, 2020 DOI: 10.1109/TEM.2020.2992682.
- [J16] G. I. Koutantos, **C. D. Nikolopoulos**, A. T. Baklezos and C. N. Capsalis, "Proper Equipment Ordinance for Achieving EM Cleanliness in Space Missions: The Case of ELF Electric Sources", *IEEE Transactions on Electromagnetic Compatibility*, 2019, DOI: 10.1109/TEM.2019.2937379.
- [J15] **C. D. Nikolopoulos**, A. T. Baklezos, Stylianos Tsatalas and C. N. Capsalis, "Verification of Radiated Emissions Model of SpW/LVDS Links Routed with CFRP Ground", *IEEE Transactions on Aerospace and Electronic Systems*, vol. 56, no. 1, pp. 393-402, Feb. 2020. DOI: 10.1109/TAES.2019.2914540.
- [J14] **C. D. Nikolopoulos**, A. T. Baklezos, Nikolaos - Antonios Livanos and C. N. Capsalis, "UWB Patch Antenna with Composite Dielectric Substrate for Subcutaneous Biomedical Sensing", *International Journal on Communications Antennas and Propagation* Vol.9, No 2, 2018.
- [J13] N.-A. Livanos, S. Hammal, **C. D. Nikolopoulos**, A. T. Baklezos, C. N. Capsalis, G. Koulouras, I. O. Vardiambasis, A. Nasiopoulos, S. Kostopoulos, P. Asvestas, D. Cavouras and E. Siores, "Hand-held Device for InDesign and Interdisciplinary Simulations of a Hand-held Device for Internal-Body Temperature Sensing Using Microwave Radiometry", *IEEE Sensors*, vol. 18, no. 6, pp. 2421-2433, 15 March 2018. DOI: 10.1109/JSEN.2018.2791443
- [J12] A. T. Baklezos, **C. D. Nikolopoulos**, C. N. Capsalis, "An Equivalent Dipole Method with Novel Measurement Positioning for Modeling Electric Emissions in Space Missions," *Electromagnetics*, vol. 37, Issue 7, pp 439-453, 2017. DOI: 10.1080/02726343.2017.1376902
- [J11] A. T. Baklezos, **C. D. Nikolopoulos**, C. N. Capsalis, "A Planar On-Body Antenna System for Cancerous Tumor Detection through Microwave Transmission Sensing," *Journal of Electrical Engineering*, Vol. 17, issue 1, pp. 231-236, 2017
- [J10] G. I. Koutantos; **C. D. Nikolopoulos**; A. T. Baklezos; C. N. Capsalis, "On the Modeling of ELF Electric Fields for Space Mission Equipment," in *IEEE Transactions on Electromagnetic Compatibility*, vol.59, issue: 5, 2017
- [J09] A. T. Baklezos; **C. D. Nikolopoulos**; A. G. Katsouris; G. I. Koutantos; C. N. Capsalis, "Electromagnetic Emission Modeling in Case of Shielded Cabling with Respect to the Ground Dielectric Properties," in *IEEE Transactions on Electromagnetic Compatibility*, vol.58, issue: 6, pp.1-7, 2016
- [J08] A. G. Katsouris, **C. D. Nikolopoulos**, A. T. Baklezos, C. N. Capsalis, "A Novel Reconfigurable Antenna array with Controllable tuning and Beam steering," *Microwave and Optical Technology Letters*, Vol. 58, issue 8, pp. 1782-1786, 2016
- [J07] A. T. Baklezos, **C. D. Nikolopoulos**, A. Katsouris, C. N. Capsalis, "Analysis of Ultra-Wideband Elliptical Monopole with Modified Ground for Applications in Radiometric Measurements," *International Journal on Communications Antennas and Propagation*, IRECAP, vol.5, No 1, 2015
- [J06] **C. D. Nikolopoulos** and C. N. Capsalis, "Hybrid method of moments – Induced EMF Method for Analyzing Multi-Element Planar Inverted F Antenna Arrays," in *IET Microwaves, Antennas & Propagation*, vol. 9, no. 7, pp. 657-663, 5 15 2015.

- [J05] **C. D. Nikolopoulos**, A. T. Baklezos and C. N. Capsalis, "Auto Reconfigurable Patch Antenna for Biomedical Single Channel Multi-Frequency Microwave Radiometry Applications", *Progress In Electromagnetics Research C*, Vol. 49, 19-29, 2014
- [J04] **C. D. Nikolopoulos** and C. N. Capsalis, "A Novel Antenna System for Body Temperature Change Detection Appropriate for Multi-channel Microwave Radiometry", *Progress in Electromagnetic Research (PIER) M*, vol. 33, p.197-209, 2013
- [J03] **C. D. Nikolopoulos** and C. N. Capsalis, "A small broadband switched-beam cross Pifa for mobile WiMAX applications", *Journal of Electromagnetic Waves and Applications- JEMWA*, vol. 26, Issue 17-18, pp. 2418-2425, 2012.
- [J02] **C. D. Nikolopoulos** and C. N. Capsalis, "The Impact of Corrugations In Optimized Planar Inverted F Antennas (Pifa's)," *International Journal on Communications antenna and Propagation*, IRECAP vol. 2, no1., feb. 2012
- [J01] T. D. Dimousios, **C. D. Nikolopoulos**, S. A. Mitilineos, C. N. Capsalis, "Design and Development of A New, Low- Profile And Low-Cost Spa-Pifa, Suitable for Mobile 2.4ghz Ism Applications," *Journal of Electromagnetic Waves and Applications - JEMWA*, vol. 24, no. 7, page 881-891, 2010.

### Peer Reviewed Conference Papers

- [C23] T. N. Kapetanakis, **C. D. Nikolopoulos**, C. Petridis, and I. O. Vardiambasis, "Wearable Antenna Design for Body-Centric Communications," 2nd International Symposium in Electronic Engineering, Information Technology & Education, 2020, Chania, Crete
- [C22] M. Pavec, T. Kapetanakis, **C. Nikolopoulos**, A. Baklezos, D. Stratakis, D. Moravcova, R. Soukup, T. Blecha, A. Hamacek, M. Ioannidou, and I. Vardiambasis, "Development of All-Textile Antennas for the ISM Band," 2nd International Symposium in Electronic Engineering, Information Technology & Education, 2020, Chania, Crete
- [C21] T. Kapetanakis, A. Baklezos, **C. Nikolopoulos**, N. Petrakis, A. Konstantaras, M. Ioannidou, and I. Vardiambasis, "Neural Network Estimation of the Electromagnetic Field Scattered by a Dielectric Circular Cylindrical Rod in Case of Obliquely Incident Plane Waves," 2nd International Symposium in Electronic Engineering, Information Technology & Education, 2020, Chania, Crete
- [C20] **C. D. Nikolopoulos**, A.T. Baklezos, T. N. Kapetanakis, N. Fragiadakis, I. O. Vardiambasis, "Estimation of Radiated Emissions of SpaceWire Link via Heuristic Approach for EMC Assessment," 2nd International Symposium in Electronic Engineering, Information Technology & Education, 2020, Chania, Crete
- [C19] A.T. Baklezos, **C. D. Nikolopoulos**, T. N. Kapetanakis, N. Fragiadakis, I. O. Vardiambasis, "Implications on ELF Electric Field Distribution due to Spacecraft Conductive Boundaries", 2nd International Symposium in Electronic Engineering, Information Technology & Education, 2020, Chania, Crete
- [C18] A. Bechrakis, A. Mavropoulou, **C. D. Nikolopoulos**, A.T. Baklezos, C. N. Capsalis, "EMC Assessment on ELF Magnetic Behavior of SpaceWire Link, IEEE International Conference on Applied Mathematics & Computer Science, 2020, Marathon, Athens
- [C17] M. Pavec, T. N. Kapetanakis, M.P. Ioannidou, **C. D. Nikolopoulos**, A. T. Baklezos, R. Soukup, T. Blecha, A. Hamacek, I. O. Vardiambasis, "Implementation of an all-textile bow-tie antenna for the 868 MHz ISM band," 2020 International Symposium on Electromagnetic Compatibility (EMC EUROPE), Rome, 2020
- [C16] **C. D. Nikolopoulos**, A. T. Baklezos, I. Marziali, M. Nicoletto, D. Boschetti, C. N. Capsalis, "An ELF Radiation Model for Estimating the Transient Electric Behavior of Space Units," 2020 International Symposium on Electromagnetic Compatibility (EMC EUROPE), Rome, 2020 (**Best Paper Nominee**)
- [C15] A. T. Baklezos, **C. D. Nikolopoulos**, T. N. Kapetanakis, I. O. Vardiambasis, C. N. Capsalis, "Spacecraft Hull Effect on Radiated Emissions and Optimal Onboard Payload Allocation," 2020 International Symposium on Electromagnetic Compatibility (EMC EUROPE), Rome, 2020 (**Best Paper Nominee**)
- [C14] A. T. Baklezos, **C. D. Nikolopoulos**, I. R. Sigalas and C. N. Capsalis, "Measurement and Modeling of SpaceWire Radiation for Electromagnetic Compatibility Assessment," *2020 IEEE International Instrumentation and Measurement Technology Conference (I2MTC)*, Dubrovnik, Croatia, 2020, pp. 1-5, doi: 10.1109/I2MTC43012.2020.9128502.
- [C13] N. Tsakoumis, A. T. Baklezos, I. O. Vardiambasis, T. N. Kapetanakis and **C. D. Nikolopoulos**, "Fluxgate Configuration for Obtaining Magnetic Properties of Catalytic Nanoparticles: A Feasibility Study," *2020 IEEE International Instrumentation and Measurement Technology Conference (I2MTC)*, Dubrovnik, Croatia, 2020, pp. 1-5, doi: 10.1109/I2MTC43012.2020.9129568.
- [C12] **C. D. Nikolopoulos**, A. T. Baklezos and C. N. Capsalis, "A Novel Approach to Radiated Emissions Modeling of Low Voltage Differential Signal on SpaceWire Cable Employing Differential Evolution," *2019 Photonics & Electromagnetics Research Symposium - Spring (PIERS-Spring)*, Rome, Italy, 2019, pp. 1929-1936, doi: 10.1109/PIERS-Spring46901.2019.9017308.
- [C11] E. G. Chatzineofytou, S. T. Spantideas, **C. D. Nikolopoulos**, A. T. Baklezos, D. Boschetti, I. Marziali, M. Nicoletto, C. N. Capsalis, "Decoupling of Ground Plane Effect on Low Frequency Magnetic and Electric Field Measurements & Modeling," *2019 ESA Workshop on Aerospace EMC (Aerospace EMC)*, Budapest, Hungary, 2019, pp. 1-6. doi: 10.23919/AeroEMC.2019.8788906
- [C10] C. N. Capsalis, **C. D. Nikolopoulos**, S. T. Spantideas, A. T. Baklezos, E. G. Chatzineofytou, G. I. Koutantos, D. Boschetti, I. Marziali, M. Nicoletto, S. Tsatalas, Klaus Mehlem, A. Junge, "EMC Assessment for Pre-Verification of THOR Mission Electromagnetic Cleanliness

Approach," *2019 ESA Workshop on Aerospace EMC (Aerospace EMC)*, Budapest, Hungary, 2019, pp. 1-6. doi: 10.23919/AeroEMC.2019.8788958.

- [C9] A. T. Baklezos, **C. D. Nikolopoulos**, S. T. Spantideas, E. G. Chatzineofytou, D. Boschetti, I. Marziali, M. Nicoletto, C. N. Capsalis, "Steady State Emissions Modeling of Low Frequency Magnetic and Electric Fields Generated by GOCE CDMU," *2019 ESA Workshop on Aerospace EMC (Aerospace EMC)*, Budapest, Hungary, 2019, pp. 1-5. doi: 10.23919/AeroEMC.2019.8788927
- [C8] **C. D. Nikolopoulos**, A. T. Baklezos, C. N. Capsalis, "Measuring Transient and Steady State Electromagnetic Emissions of Space Equipment For Emc And Cleanliness Purposes," ICHVE 2018 - 2018 IEEE International Conference on High Voltage Engineering and Application, Athens, 10-13 Sept., 2018.
- [C7] S. Tsatalas, N-A. Livanos, S. T. Spantideas, C. N. Capsalis, S. Kakarakis, N. C. Kapsalis, **C. D. Nikolopoulos**, "An Innovative Multi-Magnetometer Facility for On-Ground Magnetic Measurements of Spacecraft Equipment," 7<sup>o</sup> Ordinary National Conference in Metrology, Athens, 11-12 May 2018 (Greek title translated)
- [C6] A. T. Baklezos, **C. D. Nikolopoulos**, C. N. Capsalis, S. Tsatalas, "The effect of the code word length and Pulse Bitrate in measurements of radiated emissions for the SpaceWire Cable", 7<sup>o</sup> Ordinary National Conference in Metrology, Athens, 11-12 May 2018 (Greek title translated)
- [C5] A. T. Baklezos, **C. D. Nikolopoulos**, C. N. Capsalis, S. Tsatalas, "Effect of LVDS Link Speed and Pattern Length on Spectrum Measurements of a SpaceWire Harness," IEEE Int. Workshop on Antennas Technology (iWAT), pp. 38-41, Athens, 2017
- [C4] A.D. Savva, S.A. Kostopoulos, P.A. Asvestas, **C.D. Nikolopoulos**, C.N. Capsalis, and D.A. Cavouras, Breast Tumor Presence and Site Detection Employing Passive Microwave Radiometry Imaging, 6<sup>th</sup> Panhellenic Conference of Biomedical Engineering, Athens, 6-8 May, 2015.
- [C3] S.A. Kostopoulos, A.D. Savva, P.A. Asvestas, **C. D. Nikolopoulos**, C.N. Capsalis and D.A. Cavouras, "Early breast cancer detection method based on a simulation study of single-channel passive microwave radiometry imaging" 4<sup>th</sup> International Conference on Mathematical Modeling in Physical Sciences, June 5-8, 2015, Mykonos, Greece
- [C2] **C. D. Nikolopoulos**, K. D. Stravoskoufis and C. N. Capsalis, "A New Small and Low-Cost Wideband Pifa with Corrugations Based On Digital Dividend," PIERS, Aug.2012.
- [C1] **C. D. Nikolopoulos**, C. I. Tsitouri, T. D. Dimousios and C. N. Capsalis, "A Compact Single Feed, Low Cost Broadband Switched-Beam Antenna for Mobile WiMAX Applications," PIERS, 85-88, 2011.

## Books

- [B2] **C. D. Nikolopoulos**, "Recent Trends on Electromagnetic Environmental Effects for Aeronautics and Space Applications. IGI Global.2020 <http://doi:10.4018/978-1-7998-4879-0>
- [B1] **C. D. Nikolopoulos**, "Electromagnetic Compatibility for Space Systems Design", Hershey, PA: Engineering Science Reference, IGI Global, 2018 (DOI: 10.4018/978-1-5225-5415-8)

## Editorial in Edited Volumes

- [B2] **C. D. Nikolopoulos**, "Preface" in Recent Trends on Electromagnetic Environmental Effects for Aeronautics and Space Applications. IGI Global. <http://doi:10.4018/978-1-7998-4879-0>
- [B1] **C. D. Nikolopoulos**, "Preface" in Electromagnetic Compatibility for Space Systems Design, Hershey, PA: Engineering Science Reference, IGI Global, 2018 (DOI: 10.4018/978-1-5225-5415-8)

## Chapters in Edited Volumes

- [BC4] **C. D. Nikolopoulos**, (2020). Recent Advances on Measuring and Modeling ELF-Radiated Emissions for Space Applications." Recent Trends on Electromagnetic Environmental Effects for Aeronautics and Space Applications, edited by Christos D. Nikolopoulos, IGI Global, 2021, pp. 1-38. <http://doi:10.4018/978-1-7998-4879-0.ch001>
- [BC3] A. P. Mavropoulou, A. D. Bechrakis Triantafyllos, & **C. D. Nikolopoulos**, (2020). Aspects of Extremely Low Frequency Electric and Magnetic Cleanliness on Space Platforms. In Nikolopoulos, C. D. (Ed.), Recent Trends on Electromagnetic Environmental Effects for Aeronautics and Space Applications (pp. 127-146). IGI Global. <http://doi:10.4018/978-1-7998-4879-0.ch005>
- [BC2] **C. D. Nikolopoulos**, (2017) Extremely Low Frequency Electric Field Emissions for Space Applications: Measuring & Modeling Techniques In C. D. Nikolopoulos (Ed), Electromagnetic Compatibility for Space Structure Design (pp. 1-37), Hershey, PA: Engineering Science Reference, IGI Global, 2018. DOI: 10.4018/978-1-5225-5415-8.ch001
- [BC1] **C. D. Nikolopoulos**, A. T. Baklezos, C. N. Capsalis, (2016). Reconfigurable Antennas: Theory and Techniques – A Survey. In M. Matin (Ed.), Wideband, Multiband, and Smart Reconfigurable Antennas for Modern Wireless Communications (pp. 203-236). Hershey, PA: Information Science Reference. doi:10.4018/978-1-4666-8645-8.ch007

## Technical Reports

- [12] Stylianos Tsatalas, Christos D. Nikolopoulos, Sotirios Spantideas, Anargyros T. Baklezos, Elpida Chatzineofytou, Christos N. Capsalis, Pre-Verification of THOR Electro-Magnetic Cleanliness Approach AO/1-8574/16/NL/BW “DLV3401 – Validation Report (SVR),” 2018
- [11] Christos D. Nikolopoulos, Sotirios Spantideas, Anargyros T. Baklezos, Elpida Chatzineofytou, Christos N. Capsalis, Pre-Verification of THOR Electro-Magnetic Cleanliness Approach AO/1-8574/16/NL/BW “DLV\_3201\_Technical Note Algorithms for AC magnetic and ELF electric field emissions at equipment level,” 2018
- [10] Christos D. Nikolopoulos, Stylianos Tsatalas, Anargyros T. Baklezos “Technical Note (PLATO-TAS-MAN-SOW-015) – System Support to Optical Bench Harness and Grounding Design – DLV2001 Modelling, Development & Validation Test Report (DIL-2),” 2016
- [9] Christos D. Nikolopoulos, Stylianos Tsatalas, “Technical Note (PLATO-TAS-MAN-SOW-015) – System Support to Optical Bench Harness and Grounding Design – DLV1001 Analysis Report (DIL-1),” 2016
- [8] Ioannis G. Tigelis, Christos D. Nikolopoulos, Anargyros T. Baklezos, “Technical Evaluation Report (Technical / Consulting Services for Investigation the Causes of Failure to Transmit Television Signal to Panhellenic Range Stations),” 2015
- [7] Christos D. Nikolopoulos, Anargyros Baklezos, Sarantis Kakarakis, Lazaros Pragiatis, Christos Capsalis, “Technical Note TN-4. 1- Single-channel MMR-IBTM Performance Evaluation Report,” 2015
- [6] Christos D. Nikolopoulos, Anargyros Baklezos, Sarantis Kakarakis, Lazaros Pragiatis, Christos Capsalis, “Technical Note TN-3.2.1- Detailed Design for Radiometer Antenna,” 2015
- [5] Christos D. Nikolopoulos, Anargyros Baklezos, Argiro Magkanioti, Lazaros Pragiatis, Terpsichori-Helen Velivasaki, Christos Capsalis, “Technical Note TN-2.2.3- Radiometer Antenna Proof of Concept,” 2014
- [4] Christos D. Nikolopoulos, Anargyros Baklezos, Argiro Magkanioti, Lazaros Pragiatis, Terpsichori-Helen Velivasaki, Christos Capsalis, “Technical Note TN-2.2.2- Preliminary Radiometer Antenna Simulations,” 2014
- [3] Christos D. Nikolopoulos, Anargyros Baklezos, Argiro Magkanioti, Lazaros Pragiatis, Terpsichori-Helen Velivasaki, Christos Capsalis, “Technical Note TN-2.2.1- Preliminary Design for Radiometer Antenna,” 2014
- [2] Christos D. Nikolopoulos, Anargyros Baklezos, Argiro Magkanioti, Lazaros Pragiatis, Terpsichori-Helen Velivasaki, Christos Capsalis, “Technical Note TN-2.2.1- Preliminary Design for Radiometer Antenna,” 2014
- [1] Argiro Magkanioti, Terpsichori-Helen Velivasaki, Lazaros Pragiatis, Christos D. Nikolopoulos, Christos Capsalis, “Technical Note TN-1.2-Specifications, Logical Design & Requirements for Antenna,” 2013

## INVITED TALKS

---

- [2] Christos D. Nikolopoulos, Special Applications in Electromagnetic Compatibility specialized in Space Missions, ELEC TEC Forum – Innovation in Greece, 23.02.2018, M.E.C Athens, Greece
- [1] Christos D. Nikolopoulos, Study and Modeling Electromagnetic fields in Space Missions, Wireless & Long-Distance Communications Lab. – 100 Years of Education & Research in the edge of technology, School of Electrical and Computer Engineering of the NTUA (1917 – 2017), 27.11.2017, ONASSIS CULTURAL CENTER.

## PARTICIPATION IN NATIONAL/EUROPEAN PROJECTS

---

O/1-8574/16/NL/BW, "PRE-VERIFICATION OF THOR ELECTRO-MAGNETIC CLEANLINESS APPROACH"  
(EUROPEAN SPACE AGENCY - ESA ITT)  
EMTECH SPACE P.C., S. Davaki & 32 Korinthou Street 14451, Metamorfofi, Attiki, Greece  
SENIOR EMC ENGINEER (Key Personnel– WP Manager / Responsible for WP2300)

*European Space Agency ESA*  
*Dec. 2016 – Mar. 2019*  
*(Budget: 700.000,00 €)*

PLATO MISSION - PROJECT ALLOCATED BY THALES ALENIA SPACE ITALIA (TASI), “PLATO M3 PHASE B1  
DEFINITION STUDY - SYSTEM SUPPORT TO OPTICAL BENCH HARNESS AND GROUNDING DESIGN” (EUROPEAN  
SPACE AGENCY - ESA ITT)  
EMTECH SPACE P.C., S. Davaki & 32 Korinthou Street 14451, Metamorfofi, Attiki, Greece  
SENIOR RESEARCHER (Proposal Author/ Key Personnel / Responsible for WP2000, WP3000)

*Thales Alenia Space, TAS-I*  
*Apr. 2016 – Aug. 2016*  
*(Budget: 50.000,00 €)*

TECHNICAL & CONSULTING SERVICES FOR INVESTIGATION THE CAUSES OF FAILURE TO TRANSMIT TELEVISION  
SIGNAL TO PANHELLENIC RANGE STATIONS  
National & Kapodistrian University of Athens, School of Sciences, Physics Department, Special  
Account for Research Funding (ELKE)  
SENIOR RESEARCHER

*Digea S.A.*  
*Jun. 2015 – Jul. 2015*  
*(Budget: 25.000,00 €)*

<p>EMC/EMI MEASUREMENT AND ELECTROMAGNETIC INTERFERENCE BETWEEN LTE AND UMTS SIGNALS IN POWER SUPPLIES AND MONITORING BOXES FOR LTE BASE STATIONS. National Technical University of Athens, School of Electrical &amp; Computer Engineering, Wireless &amp; Long-Distance Communication Lab. SENIOR RESEARCHER</p>	<p><i>RAYCAP S.A.</i> <i>Jun. 2014 – Jul. 2014</i> <i>(Budget: 3.000,00 €)</i></p>
<p>FISCAL SYSTEMS OPERATIONAL CHARACTERISTICS EVALUATION AND CONNECTIONS INTERFACE TO REMOTE SERVER (ICCS PROJECT CODE: 62104400) National Technical University of Athens, School of Electrical &amp; Computer Engineering, Wireless &amp; Long-Distance Communication Lab. SENIOR RESEARCHER</p>	<p><i>ICCS –NTUA</i> <i>Jan. 2015 – Dec. 2020</i> <i>(Budget: 400.000,00 €)</i></p>
<p>FUNCTION AND OPERATION TESTING OF VESSEL MONITORING SYSTEMS BASED ON ΦEK 3170/2018 (ICCS PROJECT CODE: 62104400) National Technical University of Athens, School of Electrical &amp; Computer Engineering, Wireless &amp; Long-Distance Communication Lab. SENIOR RESEARCHER</p>	<p><i>ICCS –NTUA</i> <i>Sept. 2018 – Sept. 2021</i> <i>(Budget: 40.000,00 €)</i></p>
<p>FUNCTION AND OPERATION TESTING OF ELECTRONIC DEVICES AND SYSTEMS (ICCS PROJECT CODE: 63109000) National Technical University of Athens, School of Electrical &amp; Computer Engineering, Wireless &amp; Long-Distance Communication Lab. SENIOR RESEARCHER</p>	<p><i>ICCS –NTUA</i> <i>Jul. 2019 – Dec. 2021</i> <i>(Budget: 30.000,00 €)</i></p>
<p>CONSULTING SERVICES FOR THE DEVELOPMENT OF DIGITAL FREQUENCY MAP FOR THE TERRESTRIAL DIGITAL VIDEO BROADCASTING AND PROCEDURES FOR INTERNATIONAL COORDINATION FOR THE MINISTRY OF DIGITAL TELECOMMUNICATIONS AND INFORMATION POLICY (ICCS PROJECT CODE: 61114800) National Technical University of Athens, School of Electrical &amp; Computer Engineering, Wireless &amp; Long-Distance Communication Lab. SENIOR RESEARCHER</p>	<p><i>ICCS –NTUA</i> <i>Sept. 2018 – Jun. 2019</i> <i>(Budget: 74.400,00 €)</i></p>
<p>CONSULTING SERVICES FOR THE DEVELOPMENT OF DIGITAL FREQUENCY MAP FOR THE DIGITAL AUDIO BROADCASTING AND PROCEDURES FOR INTERNATIONAL COORDINATION FOR THE MINISTRY OF DIGITAL TELECOMMUNICATIONS AND INFORMATION POLICY (ICCS PROJECT CODE: 61111600) National Technical University of Athens, School of Electrical &amp; Computer Engineering, Wireless &amp; Long-Distance Communication Lab. SENIOR RESEARCHER</p>	<p><i>ICCS –NTUA</i> <i>Oct. 2017 – Jul. 2018</i> <i>(Budget: 74.400,00 €)</i></p>
<p>CONSULTING SERVICES TO THE SECRETARIAT TELECOMMUNICATIONS AND POST MINISTRY FOR DIGITAL POLICY, TELECOMMUNICATIONS AND INFORMATION FOR THE INTERNATIONAL COORDINATION OF TERRESTRIAL DIGITAL VIDEO BROADCASTING RADIOFREQUENCIES (ICCS PROJECT CODE: 61111300) National Technical University of Athens, School of Electrical &amp; Computer Engineering, Wireless &amp; Long-Distance Communication Lab. SENIOR RESEARCHER</p>	<p><i>ICCS –NTUA</i> <i>Jun. 2017 – Mar. 2018</i> <i>(Budget: 74.400,00 €)</i></p>
<p>CONSULTING SERVICES FOR DIGITAL TELEVISION TO THE MINISTRY OF INFRASTRUCTURE, TRANSPORTS &amp; NETWORKS (ICCS PROJECT CODE: 61110500) National Technical University of Athens, School of Electrical &amp; Computer Engineering, Wireless &amp; Long-Distance Communication Lab. SENIOR RESEARCHER</p>	<p><i>ICCS –NTUA</i> <i>May. 2016 – Jan. 2017</i> <i>(Budget: 74.400,00 €)</i></p>
<p>MEASUREMENT AND ANALYSIS OF SPACEWIRE SYSTEM ABOVE CONDUCTIVE MATERIALS (SYSTEM SUPPORT TO OPTICAL BENCH HARNESS AND GROUNDING DESIGN PLATO-TAS-ITALIA S.P.A. (ICCS PROJECT CODE: 62099200) National Technical University of Athens, School of Electrical &amp; Computer Engineering, Wireless &amp; Long-Distance Communication Lab. SENIOR RESEARCHER</p>	<p><i>THALES ALENIA SPACE, TAS-I</i> <i>Apr. 2016 – Aug. 2016</i> <i>(Budget: 50.000,00 €)</i></p>



CONSULTING SERVICES TO THE MINISTRY. INFRASTRUCTURE, TRANSPORTS. & NETWORKS FOR THE NEGOTIATION PROCESS WITH THE TELECOMMUNICATION WAKES COUNTRIES AND THE RESULTS OF FREQUENCY ALLOCATION OF THE DIGITAL TERRESTRIAL BROADCAST (ICCS PROJECT CODE: 61092700)  
National Technical University of Athens, School of Electrical & Computer Engineering, Wireless & Long-Distance Communication Lab.  
SENIOR RESEARCHER

*ICCS –NTUA  
Jan. 2014 – May. 2015  
(Budget: 74.400,00 €)*

TECHNICAL CONSULTANT FOR UPDATING FM RADIO FREQUENCY MAP AND SUPPORT TO THE RELEVANT INTERNATIONAL FREQUENCY COORDINATION (ICCS PROJECT CODE: 61092100)  
National Technical University of Athens, School of Electrical & Computer Engineering, Wireless & Long-Distance Communication Lab.  
SENIOR RESEARCHER

*ICCS –NTUA  
Dec. 2013 – Jul. 2015  
(Budget: 50.000,00 €)*

COORDINATOR OF THE RESEARCH PROJECT ENTITLED "MULTICHANNEL MICROWAVE RADIOMETRY FOR INTERNAL BODY TEMPERATURE MEASUREMENT (NSRF 2007 -2013), BILATERAL COLLABORATION IN RESEARCH AND TECHNOLOGY BETWEEN GREECE AND CHINA. (GSRT CODE: 12CHN181). (ICCS PROJECT CODE: 68002000)  
National Technical University of Athens, School of Electrical & Computer Engineering, Wireless & Long-Distance Communication Lab.  
SENIOR RESEARCHER

*ICCS –NTUA  
Apr. 2013 – Nov. 2015  
(Budget: 700.000,00 €)*

FUNCTIONAL TEST FOR ON-LINE FISCAL MECHANISMS BASED ON FISCAL LAW ΠΟΛ 1220/2012 ΚΑΙ 1221/2012 (ICCS PROJECT CODE: 62090100)  
National Technical University of Athens, School of Electrical & Computer Engineering, Wireless & Long-Distance Communication Lab.  
SENIOR RESEARCHER

*ICCS –NTUA  
Apr. 2013 – Apr. 2018  
(Budget: 100.000,00 €)*

ΑΝΑΛΥΣΗ ΛΕΙΤΟΥΡΓΙΚΩΝ ΔΙΑΔΙΚΑΣΙΩΝ ΦΟΡΟΛΟΓΙΚΩΝ ΜΗΧΑΝΙΣΜΩΝ ΜΕ ΒΑΣΗ ΤΙΣ ΕΚΑΣΤΟΤΕ ΙΣΧΥΟΥΣΕΣ ΤΕΧΝΙΚΕΣ ΠΡΟΔΙΑΓΡΑΦΕΣ ΤΟΥ ΥΠ. ΟΙΚΟΝΟΜΙΚΩΝ (ICCS PROJECT CODE: 62087500)  
National Technical University of Athens, School of Electrical & Computer Engineering, Wireless & Long-Distance Communication Lab.  
SENIOR RESEARCHER

*ICCS –NTUA  
Sept. 2012 – Sept. 2015  
(Budget: 80.000,00 €)*

FUNCTION TEST AND COMPATIBILITY STUDY FOR FISCAL SYSTEMS LAYOUT (ICCS PROJECT CODE: 62075700)  
National Technical University of Athens, School of Electrical & Computer Engineering, Wireless & Long-Distance Communication Lab.  
SENIOR RESEARCHER

*ICCS –NTUA  
May. 2008 – Apr. 2013  
(Budget: 80.000,00 €)*

STUDY OF HARMONIZATION OF TV CHANNELS IN THE FRAMEWORK OF ITS IMPLEMENTATION UNDER ARTICLE 9 - GREEK LAW N.3548/2007 (ICCS PROJECT CODE: 61073300)  
National Technical University of Athens, School of Electrical & Computer Engineering, Wireless & Long-Distance Communication Lab.  
SENIOR RESEARCHER

*ICCS –NTUA  
Apr. 2008 – Aug. 2008  
(Budget: 50.000,00 €)*

STUDY FOR SOFTWARE COMPLIANCE OF SPECIALIZED FISCAL MECHANISMS (NTUA PROJECT CODE: 62224100)  
National Technical University of Athens, School of Electrical & Computer Engineering, Wireless & Long-Distance Communication Lab.  
SENIOR RESEARCHER

*ELKE –NTUA  
May 2007 – Apr. 2012  
(Budget.: 120.000,00 €)*

DATA INTEGRITY AND VALIDATION EXPORTED FROM FISCAL MECHANISMS (NTUA PROJECT CODE: 62203000)  
National Technical University of Athens, School of Electrical & Computer Engineering, Wireless & Long-Distance Communication Lab.  
SENIOR RESEARCHER

*ELKE –NTUA  
Dec. 2005 – Nov. 2010  
(Budget.: 120.000,00 €)*

SOFTWARE COMPATIBILITY STUDY OF FISCAL SYSTEMS ACCORDING TO THE TECHNICAL SPECIFICATION OF THE MINISTRY OF FINANCE (ICCS PROJECT CODE: 62069700)  
National Technical University of Athens, School of Electrical & Computer Engineering, Wireless & Long-Distance Communication Lab.

*ICCS –NTUA  
Jan. 2007 – Dec. 2011  
(Budget : 90.000,00 €)*



## PARTICIPATION IN WORKING GROUPS

---

APPROVAL AND SUITABILITY TAX MECHANISM COMMITTEE  
Independent Authority for Public Revenue (IAPR)  
REGULAR MEMBER

*IAPR, Athens  
June 2017 – June 2019*

APPROVAL AND SUITABILITY TAX MECHANISM COMMITTEE  
Ministry of Finance - General Secretariat of Tax & CUSTOMS Affairs / Directorate General for Taxation  
ADVISORY MEMBER

*GSIS, Athens  
January 2011 – June 2017*

SUBGROUP OF THE E-INVOICING COMMITTEE  
Ministry of Finance - General Secretariat of Information Systems  
ADVISORY MEMBER

*GSIS, Athens  
May 2016 – December. 2016*

SUBGROUP FOR SECURITY AND APPLICATION SOFTWARE OF THE MONITORING COMMITTEE AND TECHNICAL SUPPORT FOR MONITORING INPUT - OUTPUT AT THE GAS STATIONS  
Ministry of Development, Competitiveness, Infrastructure, Transport and Networks on the installation of integrated systems, base N.3784 / 2009 of JMD F2-1617/2012 and POL1009/12  
REGULAR MEMBER

*YME, Athens  
September 2012 – October 2012*

TASK FORCE WORKING IN THE MINISTRY OF FINANCE, TO PROVIDE THE NECESSARY TECHNICAL AND INSTITUTIONAL FRAMEWORK FOR THE ADAPTATION AND REVISION OF EXISTING STANDARDS OF FISCAL ELECTRONIC DEVICES (SENDING DATA SECURITY AND DATA ENCRYPTION ALGORITHMS - F.I.M.). A.Y.O. D6A14420EX2011EMP/27-5-2011.  
Ministry of Finance - General Secretariat of Tax & CUSTOMS Affairs / Directorate General for Taxation. Code books& Elements, Address 15th. AVC: D6A 1119099 ON 13.9.2010.  
REGULAR MEMBER

*Ministry of Finance, Athens  
June 2011 – August 2011*

MEMBER OF THE WORKING GROUP ON EVALUATION UPDATE, SPECIALIZATION AND REVISION OF TECHNICAL SPECIFICATIONS TAX ELECTRONIC PROCESSES & SYSTEMS AND THEIR IMPLEMENTATION TO ENSURE FISCAL DATA.  
Ministry of Finance - General Secretariat of Tax & CUSTOMS Affairs / Directorate General for Taxation. Code books& Elements, Address 15th. AVC: D6A 1119099 ON 13.9.2010.  
REGULAR MEMBER

*Ministry of Finance, Athens  
September 2010 – December 2010*

## ACADEMIC / SERVICE ACTIVITIES

---

### Reviewer in international peer reviewed journals

IEEE Transactions on Electromagnetic Compatibility  
IEEE Transactions on Industrial Electronics  
IEEE Access  
IEEE Antennas & Wireless Propagation Letters (AWPL)  
IEEE Communication Letters  
IET Microwaves, Antennas & Propagation  
IET Networks  
Hindawi, Journal of Sensors  
PIERS, Progress in Electromagnetics Research  
Taylor & Francis, Journal of Electromagnetic Waves and Applications  
IGI Global, Book  
Energies, MDPI  
Electronics, MDPI  
Sustainability, MDPI

## Assessor/ Evaluator in Testing Laboratories

Hellenic Accreditation System (ESYD)

2017 – present

## PROFESSIONAL AFFILIATIONS

---

Licensed Radioelectrologist Grade A'

YME, Athens

Jan. 2014

## STUDENT SUPERVISION AND MENTORING

---

### National Technical University of Athens

School of Electrical & Computer Engineering - Wireless & Long Distance Communications Lab

Alexandros Bechrakis, Undergraduate Student	2019 – 2020
<i>Title of Dissertation: Development and Assembly of Measurement Setup for DC and ELF Magnetic Behavior of SpaceWire Link</i>	
Alexandra Mavropoulou, Undergraduate Student	2019 – 2020
<i>Title of Dissertation: Development and Assembly of Measurement Setup for DC and ELF Magnetic Behavior of SpaceWire Link</i>	
Areti Petsa, Undergraduate Student	2019 – 2020
<i>Title of Dissertation: Assessments of SpaceWire Radiated Emissions</i>	
Anargyros Baklezos, PhD Student	2014 – 2020
<i>Title of Dissertation: Smart Antenna Systems and Applications in Modeling Electromagnetic Phenomena</i>	
Grigorios Koutantos, PhD Student	2016 – 2019
<i>Title of Dissertation: Modeling Electromagnetic Fields in Space Missions</i>	
Panos Chronopoulos, Undergraduate Student	2016 – 2017
<i>Title of dissertation: Image Theory in modeling ELF electric field</i>	
Marios Despotidis, Undergraduate Student	2016 – 2018
<i>Title of dissertation: Metamaterials in Antenna Design</i>	
Victoria Athanasopoulou, Undergraduate Student	2015 – 2018
<i>Title of dissertation: Development of passive antenna systems for sensing temperature changes using radiometry in ISM band</i>	
Alexandros Georgopoulos, Undergraduate Student	2015 – 2016
<i>Title of dissertation: High Power Microwave Antenna Study and Design</i>	
Christos Pappas, Undergraduate Student	2014 – 2015
<i>Title of dissertation: Interference fourth generation mobile services (LTE) in the ground digital TV.</i>	
Adrianos Katsouris, Undergraduate Student	2012 – 2013
<i>Title of dissertation: Rating radio coverage in wireless sensor systems</i>	
George Thoma, Undergraduate Student	2011 – 2012
<i>Title of dissertation: Study and simulation of the antenna factor in planar inverted F complex arrays (PIFAs).</i>	
Marios Sazos, Undergraduate Student	2011 – 2012
<i>Title of dissertation: Study and simulation of the antenna factor in planar inverted F complex arrays (PIFAs).</i>	
Constantinos Stravoskoufis, Undergraduate Student	2011 – 2012
<i>Title of dissertation: Study and simulation of the phenomenon of aspects or slots on the behavior of PIFA antenna characteristics and optimizations using genetic algorithms in the frequency of the standard DVB-T</i>	

### Hellenic Mediterranean University

School of Engineering, Department of Electronic Engineering – Telecommunication and Electromagnetic Application Lab.

Emmanouil Xiradakis, Undergraduate Student

2018 – 2019

*Title of dissertation: Study and Design of a Microstrip Patch Antenna with Modified Circular Geometry.*

## National & Kapodistrian University of Athens

School of Sciences, Department of Physics – Microwaves and Optics Application Group.

Ilias Sigalas, Undergraduate Student

2018 – 2019

*Title of dissertation: Assessments of SpaceWire Radiated Emissions*

## TEACHING EXPERIENCE

---

### Hellenic Mediterranean University

Adjunct Lecturer for undergraduate level courses on

*Sept. 2020– present*

- Linear Algebra & Differential/ Integral Calculus
- Electromagnetic Compatibility
- Data mining

Adjunct Lecturer for undergraduate level courses on:

*Sept. 2018– Sept. 2019*

- Antennas & Wireless Links
- Microwaves and Millimeter Wave Technologies
- Radar Communications

*Sept. 2019– Sept. 2020*

- Digital Radio-telecommunication Systems
- Linear Algebra & Differential/ Integral Calculus
- Numerical Analysis and Implementation Environments

### National Technical University of Athens

*Jul. 2009 – March 2020*

Teaching assistant for undergraduate level courses on:

- Antennas & Propagation
- Wireless Links

## PROFESSIONAL DEVELOPMENT

---

### Certifications

- Seminar - Installation and operation of the quality management system: Standard **EAOT EN ISO/IEC 17025: 2017** & quality management system of ESYD..
- Installation and operation of the quality management system according to the international standard **EN ISO 9001:2015, EN ISO 14001:2015**, general requirements above standard and special requirements for written documentation concerning the quality management system techniques to internal inspections.
- Installation and operation of the quality management system according to the international standard **EN ISO 9001:2008**, general requirements above standard and special requirements for written documentation concerning the quality management system techniques to internal inspections.

*ESYD  
March 2018*

*EBETAM  
June 2017*

*EBETAM  
June 2010*