

Andreas Tsigkopoulos

**PROFESSOR
SECTOR OF BATTLE SYSTEMS,
NAVAL OPERATIONS, SEA STUDIES,
NAVIGATION, ELECTRONICS & TELECOMMUNICATIONS
HELLENIC NAVAL ACADEMY**

CURRICULUM VITAE

January 2023

1. PERSONAL DATA

SURNAME : TSIGKOPOULOS
NAME : ANDREAS
BIRTH PLACE : ATHENS
BIRTH DATE : 18/04/1962
MARITAL STATUS : Married, 2 children.
PRESENT JOB : Professor, Hellenic Naval Academy.
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2. STUDIES

- 1988 - 1991** **Doctorate Degree (Ph.D), Athens University, Informatics Department, Greece.**
Ph.D. thesis title: "Study of novel structures of high performance semiconductor laser for coherent optical fiber communications"
Supervisors: Prof. C. Caroubalos and Prof. T. Spicopoulos.
- 1986 - 1987** **Certificat d' Etudes Superieures, Ecole Nationale Superieure des Telecommunications, Paris, France.**
Graduate studies in Optoelectronics and Microwaves.
- 1980 - 1985** **University of Patras, Greece, Electrical Engineer Diploma.**
- Duration of studies: 5 years.
 - Overall degree grade: 7.58/10.
 - Main areas of study: analogue and digital electronics, electromagnetic fields, optical and wireless communications, signal processing.

3. PROFESSIONAL EXPERIENCE

- 27/10/2022 – today** **Hellenic Naval Academy: Professor** in the Sector of Battle Systems, Naval Operations, Sea Studies, Navigation, Electronics and Telecommunications. Job description: (a) teaching electronics & telecommunications classes and lab to the Navy cadets, (b) conducting research on optical communications, (c) Head of the electronics laboratory of the Hellenic Naval Academy, (d) member of the evaluation committee of the Hellenic Naval Academy.
- 20/07/2015 – 26/10/2022** **Hellenic Naval Academy: Associate Professor** in the Sector of Battle Systems, Naval Operations, Sea Studies, Navigation, Electronics and Telecommunications. Job description: (a) teaching electronics & telecommunications classes and lab to the Navy cadets, (b) conducting research on optical communications, (c) Head of the electronics laboratory of the Hellenic Naval Academy, (d) member of the evaluation committee of the Hellenic Naval Academy.
- 31/12/2008 – 19/07/2015** **Hellenic Naval Academy: Assistant Professor** in the Sector of Battle Systems, Naval Operations, Sea Studies, Navigation, Electronics and Telecommunications. Job description: (a) teaching electronics & telecommunications classes and lab to the Navy cadets, (b) conducting research on optical communications, (c) Head of the electronics laboratory of the Hellenic Naval Academy, (d) member of the evaluation committee of the Hellenic Naval Academy.
- 23/1/2004 – 30/12/2008** **Hellenic Naval Academy: Lecturer** in the Sector of Battle Systems, Naval Operations, Sea Studies, Navigation, Electronics and Telecommunications. Job description: (a) teaching electronics & telecommunications classes and lab to the Navy cadets, (b) conducting research on optical communications.
- 1/7/1997 – 22/1/2004** **Hellenic Naval Academy: Scientific Associate** in the Chair of Electronics. Job description: teaching electronics & telecommunications classes and lab to the Navy cadets.

7/2/1993 – 31/7/1996

Hellenic Naval Academy: Scientific Associate in the Chair of Electronics. Job description: teaching the course of "Lasers - Electromagnetic Compatibility" to the Sublieutenants Navy Officers.

1/11/2003 – 28/02/2005

PANOU SA. Project Manager in the audiovisual – telecommunications and security systems company PANOU SA (www.panou.gr). Job description: Head of the projects, responsible for the study, design, management, construction, personnel training and final delivery to the client of the following projects:

- (1) Five (5) **Mobile Command Centers** of the Hellenic Police and the Hellenic Fire Service that were constructed in the context of the Athens 2004 Olympic Games Security System C4I under the supervision of the US company SAIC. The MCCs are flexible and autonomous units that are designed to support locally operations and manage crisis events (e.g. natural disasters, security measures). With their enhanced system capabilities they can send information (data, video from on-board camera) to the fixed Command Centers, co-ordinate local operations and support the actions of the involved agencies by serving as a remote headquarters providing conference room facilities, full audio-visual infrastructure, VHF, TETRA, GSM, FAX and INMARSAT communications and GPS tracking. Local data network and PABX are integrated in a consistent way to allow management of all the sources of information and seamless interconnectivity of various systems. The project concerned the transformation from scratch of 5 passenger busses (MERCEDES TRAVEGO) of 50 seats each, to complete mobile headquarters with working positions, mobile and satellite communications, cameras and surveillance systems, electrical power autonomy by 2 on-board diesel generators, meeting room with video projector facilities, meteorological station, etc. The whole project lasted for 10 months with very tight deadlines and very difficult technical issues and requirements. Moreover, I had to manage and control a large number of subcontractors and company's technical staff, constantly monitor and check that the specifications are met by 100%, and at the same time work out and smooth matters that involved the Hellenic Administration Authorities and the Olympic Security Committee officers. I managed to deliver this project and have it accepted by the Olympic Security Committee as the first out of a total of 35 Olympic Games Security Projects, and get the credits for one of the most successful security projects of the Olympic Games 2004. Total budget: 5.000.000,00 euros.
- (2) One (1) **Mobile Radiological Laboratory** that was constructed following order from the U.S. Department of State and was donated to the Nuclear Regulatory Agency of the state of Bulgaria. The MRLs are flexible and autonomous units that are designed to perform radiation measurements in-situ by using special equipment and sensors (Alpha-Beta-Gamma radiation measurement sensors, Radiometers – Dosimeters). The vehicle carries personnel protective clothes and sampling equipment for taking substance samples and perform radiation measurements on site. GPS mounted on the vehicle provides continuous geographic reference of its location. Three (3) working positions are installed inside the vehicle in order to accommodate working staff. Power supply, inside the vehicle, by one inverter and two 90Amph rechargeable batteries (12VAC to 220 VDC) calculated to cover the needs of the equipment. Networked laptops allow for real-time recording, storing, processing, assessment and logging of measurement data provided by the portable radiation sensors. A portable meteorological station is able to provide meteo data to the users in order to assess possible effects of weather phenomena in population contamination situations. Vehicle MERCEDES SPRINTER, 4WD. Total budget: 250.000,00 euros.

1/4/2001 – 31/01/2003

EMIL KIPRIOTIS SA. Technical Director – Senior Consultant Engineer of the telecommunication equipment manufacturing company Emil Kipriotis SA. Job description:

- (1) Design, analysis and evaluation of new products and technologies.
- (2) Commercial development of the company in the Balkans area, specifically in Romania and Serbia and know-how transfer.
- (3) Technical training of clients' executives and technical staff in the products and processes of the company. I have trained more than 400 technicians of ROMTELECOM (Romanian PTT) and OTE (Greek PTT).

1/8/1999 – 31/3/2001

OTE-CONSULTING. Consultant on Active Equipment of the Management Team of OTE-CONSULTING "Management Consultant of Project of OTE"

for the replacement of 200.000 copper pairs with optical fiber and Optical Network Units. Job description: provide consulting services and technical support for the coordination of the study, construction and operation of the Optical Network Units inside the Big Customers' premises and the outdoor units monitored by the Local Exchange Centers of OTE (Greek PTT).

1/8/1996 – 1/9/1997

OTE SA. Expert Engineer on optical fiber technology of the Network Design Department of OTE. Job description: Introduction of new technologies in OTE's trunk network. Design of Broadband Networks and Wavelength Division Multiplexing Optical Networks of OTE SA. Main duties:

- Responsible for the Design of Optical Trunk Network of Central and East Macedonia and Thrace.
- Introduction of Digital Cross-Connects for PDH (Plesiochronous Digital Hierarchy) and SDH (Synchronous Digital Hierarchy) to the long-haul optical fiber network of OTE and preparation of the relevant technical requirements.
- Introduction of Wavelength Division Multiplexing techniques to the long-haul optical fiber network of OTE and preparation of the relevant technical requirements.
- Introduction of fiber monitoring system to the long-haul optical fiber network of OTE and preparation of the relevant technical requirements.
- Participation to the European research project EURESCOM P615 "Evolution towards an optical network layer", in charge of Task 2 that was concerned with the study and simulation of optical network architectures.

1/7/1987 – 31/7/1996

Optical Communications Group of Athens University Informatics Department. Job description: Senior researcher of the Optical Communications research group of Athens University Informatics Department.

1/11/1986 – 31/1/1987

Laboratoires de Marcoussis Alcatel-Alsthom Recherche, Paris. Job description: conducting post-graduate thesis on "Study and Optimisation of Heterodyne Receiver for Coherent Optical Fiber Communication System".

4. RESEARCH INTERESTS

- Wireless optical communication systems (FSO)
- Semiconductor optoelectronic devices – lasers
- Optical fiber communication systems
- Non linear effects in propagation

5. COURSES TAUGHT

1. "Electronics", Hellenic Navy Cadets, 1991-92 and 1997-today.
2. "Digital Electronics" Hellenic Navy Cadets, 1997-today.
3. "Analog and Digital Telecommunication Systems" Hellenic Navy Cadets, 1997-98.
4. "Transmission Lines and Waveguides" Hellenic Navy Cadets, 1992-93 and 1998-99.
5. "Antennas" Hellenic Navy Cadets, 1991-92.
6. "Electronics Laboratory" Hellenic Navy Cadets, 1991-93 and 1997-today.
7. "Introduction to Computers – BASIC programming language", School of Electronics, Hellenic Navy Petty Officers Cadets, 1991-1992.

6. GRADUATE COURSES

1. "Special Topics of Electronics – Lasers and Electromagnetic Compatibility", Hellenic Navy Officers Graduate School, 1991-96.
2. "Design and Measurements of High Frequency Devices", MSc in Electronics and Radioscience, University of Athens, 2008-2012.
3. "Mobile Communications", MSc in Electronics and Radioscience, University of Athens, 2015.

7. COURSE NOTES

1. A. Tsigopoulos, "Digital Communications Exercises", Hellenic Naval Academy, p. 65, Piraeus 1998.

2. A. Tsigopoulos, "Digital Circuits", Hellenic Naval Academy, p. 145, Piraeus 2012.
3. A. Tsigopoulos, M. E. Fafalios, C. Vazouras, "Telecommunications Systems Laboratory", Hellenic Naval Academy, p. 120, Piraeus 2000.
4. A. Tsigopoulos, "Digital Transmission of Analog Signals", Hellenic Naval Academy, p. 33, Piraeus 1998.
5. A. Tsigopoulos, "Microwave Sources", Hellenic Naval Academy, p. 27, Piraeus 1998.
6. A. Tsigopoulos, "Electromagnetic Compatibility", Hellenic Naval Academy, p. 16, Piraeus 1993.
7. A. Tsigopoulos, M. E. Fafalios, E. Karagianni, M. Sklavounou, "Electronics Lab Exercises", Hellenic Naval Academy, p. 140, Piraeus 2003.
8. E. Karagianni, A. Tsigopoulos, M. E. Fafalios, "Elements of Electronics", Hellenic Naval Academy, p. 313, Piraeus 2012.

8. BOOKS

1. A. Tsigopoulos, "Evolution of Communications Technology", Hellenic Naval Academy Publications, 1993.
2. S. Matakias, A. Tsigopoulos, A. Amditis, "Communications and Networks", approved by the Hellenic Ministry of Education for the Technical Lyceums of Greece, Sept. 1999.

9. BOOK CHAPTERS

1. L. Gkoura, G.D. Roumelas, H. Nistazakis, H.G. Sandalidis, A. Vavoulas, A. Tsigopoulos and G.S. Tombras, "Channel Models for Underwater Optical Wireless Communication Systems", provisionally accepted for publication to the InTech Book "Turbulence", ISBN: 978-953-51-5311-5, 2017.

10. JOURNAL PUBLICATIONS

- [J1] **"A Tractable Above-Threshold Model for the Design of DFB and Phase-Shifted DFB Lasers"**.
I. Orfanos, T. Sphicopoulos, A. Tsigopoulos, C. Caroubalos.
IEEE J. Quantum Electronics, vol. 27, No. 4, pp. 946-956, April 1991.
- [J2] **"Wavelength Tuning Analysis and Spectral Characteristics of Three-Section DBR Lasers"**.
A. Tsigopoulos, T. Sphicopoulos, I. Orfanos, S. Pantelis.
IEEE J. Quantum Electronics, vol. 28, No. 2, pp. 415-426, February 1992.
- [J3] **"Wavelength Tuning Analysis in Three-Electrode DFB Lasers"**.
T. Sphicopoulos, I. Orfanos, A. Tsigopoulos, C. Caroubalos.
International J. of Optoelectronics, vol. 8, No. 1, pp. 49-56, 1993.
- [J4] **"Comparison of different DFB laser models within the European COST 240 collaboration"**.
G. Morthier and R. Baets (University of Gent, IMEC, Belgium), A. Tsigopoulos and T. Sphicopoulos (University of Athens, Greece), C.F. Tsang and J.E. Carroll (University of Cambridge, UK), H. Wenzel (Humboldt University, Berlin, Germany), A. Mecozzi and A. Sapia (Fondazione Ugo Bordoni, Italy), P. Correc (France Telecom/CNET, France), S. Hansmann and H. Burkhardt (DBP, Germany), A. Paradisi and I. Montrosset (Politecnico di Torino, Italy), H. Olesen and H. E. Lassen (Tele Danmark Research, Denmark), R. Schatz (KTH-Stockholm, Sweden), H. Bissessur (Alcatel Alsthom Recherche, France).
IEE Proceedings-J. Optoelectronics, vol. 141, No. 2, pp. 82-88, April 1994.
- [J5] **"Numerical Modeling of Undercut Ridge VCSELs designed for CW operation at 1.3 μm : Design Optimization"**.
A. Tsigopoulos, V. Paschos, C. Caroubalos, P. Salet, J. Jacquet.
IEEE J. Quantum Electronics, vol. 33, No. 12, pp. 2221-2230, December 1997.
- [J6] **"Electrical Crosstalk Analysis due to Bondwire Capacitive Induced Coupling in OEIC Transceiver Modules"**.
A. Tsigopoulos, A. Chipouras, T. Sphicopoulos, D. Syvidis, M.E. Fafalios.
International J. of Optoelectronics, vol. 11, No. 4, pp. 239-246, 1997.
- [J7] **"Dissipative Solitons under the Action of the Third-Order Dispersion"**.
B.A. Malomed, D.J. Frantzeskakis, H.E. Nistazakis, A. Tsigopoulos, K. Hizanidis.
Physical Review E, vol. 60, No. 3, pp. 3324-3331, 1999.
- [J8] **"Dynamics of Pereira-Stenflo Solitons in the Presence of the Third-Order Dispersion"**.
B.A. Malomed, D.J. Frantzeskakis, H.E. Nistazakis, A. Tsigopoulos, K. Hizanidis.
Physica Scripta, vol. T82, pp. 36-41, 1999.

- [J9] **“Dynamics of anti-dark and dark solitons in (2+1)-dimensional generalized nonlinear Schrodinger equation”**.
H.E. Nistazakis, D.J. Frantzeskakis, P.S. Balourdos, A. Tsigopoulos, B.A. Malomed.
Physics Letters A, vol. 278, pp. 68-76, 18 December 2000.
- [J10] **“Calculation of radiation modes using the Lanczos-Fourier expansion”**.
N. F. Dasyras, I. G. Tigelis, A. Tsigopoulos, A. B. Manenkov.
Journal of the Optical Society of America, vol 21, No. 9, pp. 1740-1749, September 2004.
- [J11] **“Effects of Electromagnetic Radiation: Review of Existing Standards and Calculation Techniques”**.
A. Tsigopoulos, M.E. Fafalios, G. Vardoulas.
Nausivios Chora, Journal of Hellenic Naval Academy, vol. 1/2006, pp. 94-109.
- [J12] **“Performance and Reliability of Free Space Wireless Optical Systems”**.
C. Simatis, E. Karagianni, A. Tsigopoulos, M. Fafalios, H.E. Nistazakis, G.S. Tombras.
Nausivios Chora, Journal of Hellenic Naval Academy, ISSN: 1791-4469, vol. 1/2006, pp. 135-150.
- [J13] **“Capacity Estimation of Optical Wireless Communication Systems over Moderate to Strong Turbulence Channels”**.
H.E. Nistazakis, G.S. Tombras, A.D. Tsigopoulos, E.A. Karagianni, M.E. Fafalios.
Journal of Communications and Networks, vol. 11, No. 4, pp. 387 – 392, August 2009.
- [J14] **“Average Capacity of Optical Wireless Communication Systems over Atmospheric Turbulence Channels”**.
H.E. Nistazakis, E.A. Karagianni, A.D. Tsigopoulos, M.E. Fafalios, G.S. Tombras.
Special Issue of the IEEE Journal of Lightwave Technology, Vol. 27, No. 8, pp. 974-979, April 2009.
- [J15] **“Estimation of Outage Capacity for Free Space Optical Links over I-K and K Turbulent Channels”**.
H.E. Nistazakis, A.D. Tsigopoulos, M.P. Haniias, C.D. Psychogios, D. Marinos, C. Aidinis, G.S. Tombras.
Radioengineering, Special Issue towards EuCAP 2012: Emerging Materials, Methods, and Technologies in Antenna & Propagation, Vol. 20, No. 2, pp. 493-498, June 2011.
- [J16] **“Maximum Effective Bit Rate Estimation for Wireless Optical Communication Links with Time-Diversity Over Strong Turbulence Channels”**.
A.D. Tsigopoulos.
Nausivios Chora, Journal of Hellenic Naval Academy, vol. 4/2012, pp. 88-95.
- [J17] **“Probability of Fade Estimation for FSO Links with Time Dispersion and Turbulence Modelled with the Gamma-Gamma or the I-K Distribution”**.
G.K. Varotsos, A.N. Stassinakis, H.E. Nistazakis, A.D. Tsigopoulos, K.P. Peppas, C.J. Aidinis, G.S. Tombras.
OPTIK - International Journal for Light and Electron Optics, 2014, vol 125, pp. 7191-7197.
- [J18] **“Performance Study of Terrestrial Multi-Hop OFDM FSO Communication Systems with Pointing Errors Over Turbulence Channels”**.
H.E. Nistazakis, M.P. Ninos, A.D. Tsigopoulos, D.A. Zervos and G.S. Tombras.
Journal of Modern Optics, vol. 63, No. 14, pp. 1403-1413, 2016.
- [J19] **“BER Estimation of Dual-hop PSK OFDM RoFSO Communication System over K or NE Modeled Turbulence and Optical Fiber with Nonlinear Clipping Effect”**.
A.D. Tsigopoulos, M.P. Ninos, A.N. Stassinakis.
Nausivios Chora, Journal of Hellenic Naval Academy, ISSN: 1791-4469, vol. 5/2014, pp. B-17, 2014.
- [J20] **“New Performance Results for QAM OFDM RoFSO Over K and Exponentially Modeled Turbulence Channels”**.
H.E. Nistazakis, M.P. Ninos, A.N. Stassinakis, A.D. Tsigopoulos and G.S. Tombras.
Nausivios Chora, Journal of Hellenic Naval Academy, ISSN: 1791-4469, vol. 5/2014, pp. B-3, 2014.
- [J21] **“Analysis, Synchronization and Circuit Design of a 4D Hyperchaotic Hyperjerk System”**.
P.A. Daltzis, C.K. Volos, H.E. Nistazakis, A.D. Tsigopoulos and G.S. Tombras.
Open Access Computational Science Journal, MDPI AG - Computation, vol. 6, Issue 1, February 6, 2018, <https://doi.org/10.3390/computation6010014>.
- [J22] **“Reliability and Availability Study of Modern Indoor VLC Systems with eSSK Modulation”**.
A.N. Stassinakis, N.A. Androutsos and A.D. Tsigopoulos.
Nausivios Chora, Journal of Hellenic Naval Academy, vol. 7/2018, Part B, pp. B-3, 2018.
- [J23] **“Microstrip RFID Antenna Design at 5.1 GHz”**.
T.J. Korfiati, E.A. Karagianni, A.T. Arapoyianni, C.N. Vazouras, A.D. Tsigopoulos.
Nausivios Chora, Journal of Hellenic Naval Academy, vol. 7/2018, Part B, pp. B-49, 2018.
- [J24] **“Pre/Post Assessments Analysis in Training Electro-Technical Seafarers Experts”**.

- E.A. Karagianni, E.P. Apostolopoulou, I.M. Prousalidis, I.K. Gyparis, A.D. Tsigopoulos, C.N. Vazouras, A.E. Tsiakla.
Journal of Shipping and Ocean Engineering, vol.9, No. 1, Jan.-Mar. 2019, (Serial Number 37), pp. 14-29.
- [J25] **“Underwater Optical Wireless Communications with Chromatic Dispersion and Time Jitter”**.
G.D. Roumelas, H.E. Nistazakis, A.N. Stassinakis, C.K. Volos and A.D. Tsigopoulos.
Open Access Computational Science Journal, MDPI AG - Computation, vol. 7, Issue 3, July 11, 2019. <https://doi.org/10.3390/computation7030035>.
- [J26] **“Time Jitter, Turbulence and Chromatic Dispersion in Underwater Optical Wireless Links”**.
G.D. Roumelas, H.E. Nistazakis, A.N. Stassinakis, G.K. Varotsos, A.D. Tsigopoulos, G.S. Tombras.
Open Access Computational Science Journal, MDPI AG - Technologies, vol. 8, Issue 1, December 22, 2019, <https://doi.org/10.3390/technologies8010003>.
- [J27] **“Experimental Performance Analysis of an Optical Communication Channel over Maritime Environment”**.
A. Lionis, K. Peppas, H.E. Nistazakis, A. D. Tsigopoulos, K. Cohn.
Open Access Computational Science Journal, MDPI AG - Electronics, vol. 9, Issue 7, July 9, 2020, <https://doi.org/10.3390/electronics9071109>.
- [J28] **“Design and Construction of a Drone with GPS Tracking, Collision Avoidance, Surveillance via Airborne Camera and Object Tracking”**.
Z. Gerostathis, G. Thomas, A. Tsigopoulos, K. Harissis, A. Stassinakis.
International Journal of Engineering Applied Sciences and Technology, vol. 5, Issue 3, ISSN No. 2455-2143, pp. 497-500, July 2020.
- [J29] **“Statistical Modeling of Received Signal Strength for an FSO Link Over Maritime Environment”**.
A. Lionis, K. Peppas, H.E. Nistazakis, A. D. Tsigopoulos, K. Cohn.
Optics Communications, vol. 489, June 2021, <https://doi.org/10.1016/j.optcom.2021.126858>
- [J30] **“Design and Construction of a Bluetooth Controlled Obstacle Avoiding Vehicle”**.
K. Charisis, V. Sokratous, A. Tsigopoulos, A. Stassinakis.
International Journal of Engineering Applied Sciences and Technology, vol. 5, Issue 6, ISSN No. 2455-2143, pp. 8-11, October 2020.
- [J31] **“Experimental Model Development for the Attenuation Coefficient Estimation of Terrestrial Optical Wireless Lins over the Sea”**.
A.N. Stassinakis, G.A. Papavgeris, H.E. Nistazakis, A.D. Tsigopoulos, N.A. Androutsos and G.S. Tombras.
Open Access Computational Science Journal MDPI, AG – Telecom, vol. 2, Issue 1. pp. 93 – 107, March 2021, <https://doi.org/10.3390/telecom2010007>
- [J32] **“Using Machine Learning Algorithms for Accurate Received Optical Power Prediction of an FSO Link over Maritime Environment”**.
A. Lionis, K. Peppas, H.E. Nistazakis, A.D. Tsigopoulos, K. Cohn, A. Zagouras.
Open Access Computational Science Journal, MDPI AG - Photonics, vol. 8, Issue 6, June 10, 2021, <https://doi.org/10.3390/photonics8060212>.
- [J33] **“RSSI Probability Density Functions Comparison using Jensen-Shannon Divergence and Pearson Distribution”**.
A.Lionis, K. Peppas, H.E. Nistazakis, A. Tsigopoulos.
Open Access Computational Science Journal, MDPI AG - Technologies, vol. 9, Issue 2, April 8, 2021, <https://doi.org/10.3390/technologies9020026>.
- [J34] **“Time and Spatial Jitter Influence at the Performance of FSO Links with DF Relays and OC Diversity over Turbulence Channels”**.
P.J. Gripeos, H.E. Nistazakis, A.D. Tsigopoulos, V. Christofilakis and E. Roditi.
Open Access Computational Science Journal, MDPI AG - Photonics, vol. 8, Issue 8, August 7, 2021, <https://doi.org/10.3390/photonics8080318>.
- [J35] **“High Energy Laser Weapon Integration Issues for the Future Hellenic Frigate”**.
A. Lionis, A. Tsigopoulos.
Accepted for publication to Nausivios Chora, Journal of Hellenic Naval Academy, 2021”.
- [J36] **“Optical Turbulence Measurements and Modeling over Monterey Bay”**.
A. Lionis, G. Chaskakis, K. Cohn, J. Blau, K. Peppas, H.E. Nistazakis, A. Tsigopoulos.
Δημοσιεύθηκε στο περιοδικό Optics Communications: <https://doi.org/10.1016/j.opt-com.2022.128508>.
- [J37] **“An Application of Artificial Neural Networks to Estimate the Performance of High-Energy Laser Weapons in Maritime Environments”**.
A. Lionis, A. Tsigopoulos, K. Cohn.

- Open Access Computational Science Journal, MDPI AG - Technologies, vol. 10, Issue 3, June 8, 2022, <https://doi.org/10.3390/technologies10030071>.
- [J38] **“Dispersive FSO Performance Estimation with Gaussian Pulses and Laplace Modeled Time Jitter”**.
P.J. Gripeos, D. Oreinos, D. Kriempardis, A.D. Tsigopoulos, E. Kapotis, A. Katsis, H.E. Nistazakis.
Open Access Computational Science Journal, MDPI AG - Computation, vol. 11, Issue 1, January 4, 2023, <https://doi.org/10.3390/computation11010006>.
- [J39] **“Experimental Machine Learning Approach for Optical Turbulence and FSO Outage Performance Modeling”**.
A. Lionis, A. Sklavounos, A. Stassinakis, K. Cohn, A.D. Tsigopoulos, K. Peppas, K. Aidnis, H.E. Nistazakis.
Open Access Computational Science Journal, MDPI AG - Electronics, vol. 12, Issue 3, January 18, 2023, <https://doi.org/10.3390/electronics12030506>.

11. CONFERENCE PROCEEDINGS

- [C1] **“Modeling Thermal Effects and Light vs. Current Characteristics of Long Wavelength Vertical-Cavity Surface-Emitting Semiconductor Lasers for CW operation above room temperature”**.
A. Tsigopoulos, V. Paschos.
“Circuits, Systems and Computers '96”, Hellenic Naval Academy, 15-17 July 1996, ISBN 960-8485-00-2 (vol. 1), Proceedings pp. 95-101.
- [C2] **“Electrical Crosstalk Analysis due to Bondwire Capacitive Induced Coupling in OEIC Transceiver Modules”**.
A. Tsigopoulos, A. Chipouras, T. Sphicopoulos, D. Syvridis, M.E. Fafalios.
“Circuits, Systems and Computers '96”, Hellenic Naval Academy, 15-17 July 1996, ISBN 960-8485-01-0 (vol. 2), Proceedings pp. 463-470.
- [C3] **“Numerical Modeling of Long Wavelength Vertical-Cavity Surface-Emitting Semiconductor Lasers. Part 1: Continuous-Wave Modeling”**.
A. Tsigopoulos, V. Paschos, P. Salet, J. Jacquet.
2nd GR-I International Conference on “New Laser Technologies and Applications”.
Ancient Olympia, Greece, June 1-4, 1997.
- [C4] **“Numerical Modeling of Long Wavelength Vertical-Cavity Surface-Emitting Semiconductor Lasers. Part 2: Transient Thermal Modeling”**.
A. Tsigopoulos, V. Paschos.
2nd GR-I International Conference on “New Laser Technologies and Applications”.
Ancient Olympia, Greece, June 1-4, 1997.
- [C5] **“Modeling of Complex-Coupled DFB Lasers for Optical Fiber Communications”**.
A. Tsigopoulos.
“Naval Technology for the 21st Century”, Hellenic Naval Academy, 29-30 June 1998, ISBN 960-8485-04-5, Proceedings pp. 273-281.
- [C6] **“Effects of Electromagnetic Radiation: Review of Existing Standards and Calculation Techniques”**.
N. Faros, M.E. Fafalios, A. Tsigopoulos, C. Vazouras, M. Sklavounou.
“Naval Technology for the 21st Century”, Hellenic Naval Academy, 29-30 June 1998, ISBN 960-8485-04-5, Proceedings pp. 233-245.
- [C7] **“Fiber Optic Acoustic Sensors”**.
A. Tsigopoulos, M.E. Fafalios.
Conference of Acoustic Technology '98, Hellenic Naval Academy, December 1998.
- [C8] **“Stable anti-dark and dark solitons in (2+1) dimensions”**.
H.E. Nistazakis, A. Tsigopoulos.
13th Panhellenic Conference/School: “Non Linear Dynamics: Multiplicity and Chaos”, Hania 17-28 July 2000.
- [C9] **“Μη γραμμική δυναμική σκοτεινών και αντισκοτεινών σολιτονίων σε (2+1) διαστάσεις”**.
Α. Τσιγκόπουλος, Ε.Ε. Νισαζάκης, Π.Σ. Μπαλούρδος, Δ.Ι. Φραντζεσκάκης, Β.Α. Μαλούμης.
13th Panhellenic Conference/School: “Non Linear Dynamics: Multiplicity and Chaos”, Hania 17-28 July 2000.
- [C10] **“Average Capacity of Wireless Optical Communication Systems over Gamma Gamma Atmospheric Turbulence Channels”**.
H.E. Nistazakis, G.S. Tombras, A.D. Tsigopoulos, E.A. Karagianni, M.E. Fafalios.
IEEE MTT-S International Microwave Symposium (IMS 2008), Atlanta, Georgia, June 15-20, 2008, *Proceedings 2008 IEEE MTT-S, Atlanta USA*, pp. 1561-1564, 2008.
- [C11] **“Average BER Estimation of Optical Wireless Communication Links Using OOK Over Turbulence Channels”**.

- H.E. Nistazakis, G.S. Tombras, A.D. Tsigopoulos, E.A. Karagianni, M.E. Fafalios.
IET 2009 – Mosharaka International Conference on Communication, Propagation and Electronics (MIC-CPE 2009), ISBN: 978-9957-486-06-8, Amman, Jordan, February 5-8, 2009.
- [C12] **“Average and Outage Capacity Estimation of Optical Wireless Communication Systems over Weak Turbulence Channels”**.
H.E. Nistazakis, G.S. Tombras, A.D. Tsigopoulos, E.A. Karagianni, M.E. Fafalios.
IET 2009 – Mosharaka International Conference on Communication, Propagation and Electronics (MIC-CPE 2009), ISBN: 978-9957-486-06-8, Amman, Jordan, February 5-8, 2009.
- [C13] **“A Simple Method for the Multipath Effect Measurement in Highly Dispersive Wireless Optical Channels”**.
D. Marinos, H.E. Nistazakis, C. Aidinis, G.S. Tombras, M. Tsilis, A.D. Tsigopoulos, M.E. Fafalios.
3rd International Conference on Experiments/Process/System Modeling/Simulation & Optimization, 3rd IC-EpsMsO, Athens, 8-11 July, 2009, ISBN: 978-960-98941-1-1, vol. I, pp. 57-60.
- [C14] **“Estimation of Capacity Bounds of Free Space Optical Channels Under Strong Turbulence Conditions”**.
H.E. Nistazakis, D. Marinos, M. Hantias, C. Aidinis, M. Tsilis, G.S. Tombras, A.D. Tsigopoulos, M.E. Fafalios.
MIKON-2010 International Conference on Microwave, Radar and Wireless Communications, Vilnius, Lithuania, June 14-16, 2010, ISBN: 978-9955-690-20-7, vol. 2, pp. 403-405.
- [C15] **“Average Capacity Estimation of Hybrid FSO/MMW Wireless Communication Systems”**.
H.E. Nistazakis, G.S. Tombras, M.P. Hantias, A.D. Tsigopoulos, M.E. Fafalios.
IET – Mosharaka International Conference on Communication, Propagation and Electronics (MIC-CPE 2010), Amman, Jordan, March 5-7, 2010, ISBN: 978 - 9957- 486 - 10 – 5, pp. 24-29.
- [C16] **“Manchester Coding Transmitter for Wireless Optical Communications based on TMS320C1646T DSP”**.
D. Marinos, G. Alexandratos, H.E. Nistazakis, C. Aidinis, G.S. Tombras, M. Tsilis, A.D. Tsigopoulos, M.E. Fafalios
4th International Conference from Scientific Computing to Computational Engineering, 4th IC-SCCE, Athens, 7-10 July, 2010, ISBN: 978-960-98941-5-9, vol. I, pp. 364-370.
- [C17] **“Bayesian Estimation of the Performance of Gamma Gamma Free Space Optical Channels”**.
H.E. Nistazakis, A.D. Tsigopoulos, M.P. Hantias, A. Katsis, G.S. Tombras.
4th International Conference on Experiments/Process/System Modeling/Simulation/Optimization 4th IC-EpsMsO, Athens, 6-9 July, 2011, ISBN: 978-960-98941-7-3, vol. I, pp. 103-113.
- [C18] **“Wavelength Diversity for Free Space Optical Systems: Performance Evaluation over Log Normal Turbulence Channels”**.
V. Xarcha, A.N. Stassinakis, H.E. Nistazakis, A. Tsigopoulos, G.P. Latsas, M.P. Hantias, G.S. Tombras.
MIKON-2012, 19th International Conference on Microwave, Radar and Wireless Communications, Warsaw, Poland, May 21-23, 2012, ISBN: 978-1-61284-1436-8, vol 2, pp. 678-683.
- [C19] **“Evaluation of Performance Metrics for Free Space Optical Links with Time-Diversity Modeled with the I-K Distribution”**.
A. Stassinakis, V. Xarcha, H.E. Nistazakis, A.D. Tsigopoulos, G.S. Tombras.
5th International Conference from Scientific Computing to Computational Engineering 5th IC-SCCE, Athens, 4-7 July, 2012, ISBN: 978-618-80115-1-9, vol. I, pp. 211-218.
- [C20] **“Gaussian Chirped Pulse Propagation in Wireless Optical Links with Dispersion: Probability of Fade Estimation for K-Distribution Modelled Turbulence Channels”**.
A.N. Stassinakis, H.E. Nistazakis, K.P. Peppas, A.D. Tsigopoulos, M.E. Fafalios, G.S. Tombras.
5th International Conference on Experiments/Process/System Modeling/Simulation/Optimization 5th IC-EpsMsO, Athens, 3-6 July, 2013, ISBN: 978-618-80527-1-0, vol. 1, pp. 254-261, 2013.
- [C21] **“Bit Rate Depce Estimation for FSO Links with Chirped Dispersive Gaussian and Hyperbolic Secant Pulses”**.
A.N. Stassinakis, G.K. Varotsos, H.E. Nistazakis, A.D. Tsigopoulos, G.G. Chronopoulos, G.S. Tombras.
5th International Conference on Experiments/Process/System Modeling/Simulation/Optimization 5th IC-EpsMsO, Athens, 3-6 July, 2013, ISBN: 978-618-80527-1-0, vol. 1, pp. 54-61, 2013.
- [C22] **“On the Availability of Negative Exponential Turbulent FSO Links with Time Dispersion”**.
G.K. Varotsos, H.E. Nistazakis, A.D. Tsigopoulos, K.P. Peppas, C.J. Aidinis and G.S. Tombras.
6th International Conference from Scientific Computing to Computational Engineering 6th IC-SCCE, Athens, 9-12 July, 2014, ISBN: 978-618-80527-4-1, vol. II, pp. 325-332, 2014.
- [C23] **“Experimental and Theoretical Bit Rate Estimation of Turbulent FSO Link Over the Maritime Area At Piraeus Port”**.
M.N. Kampouraki, A.N. Stassinakis, H.E. Nistazakis, G.G. Chronopoulos, A.D. Tsigopoulos, M.E. Fafalios and G.S. Tombras.

- 6th **International Conference from Scientific Computing to Computational Engineering** 6th IC-SCCE, Athens, 9-12 July, 2014, ISBN: 978-618-80527-3-4, vol. I, pp. 176-183, 2014.
- [C24] **“Underwater Optical Wireless Communications: Possibilities - Disadvantages and Possible Solutions”**.
L.K. Gkoura, H.E. Nistazakis, A. Vavoulas, A.D. Tsigopoulos and G.S. Tombras.
6th **International Conference from Scientific Computing to Computational Engineering** 6th IC-SCCE, Athens, 9-12 July, 2014, ISBN: 978-618-80527-4-1, vol. II, pp. 511-518, 2014.
- [C25] **“An Experimental Setup for BER Estimation Performance of Indoor Free Space Optical Communication Systems”**.
E.G. Kochronas, H.E. Nistazakis, A.D. Tsigopoulos, C.J. Aidinis and G.S. Tombras.
6th **International Conference from Scientific Computing to Computational Engineering** 6th IC-SCCE, Athens, 9-12 July, 2014, ISBN: 978-618-80527-3-4, vol. I, pp. 48-54, 2014.
- [C26] **“OFDM Wireless Optical Communication Systems with Serial Relays over Exponentially Modeled Turbulence Channels”**.
A.N. Stassinakis, H.E. Nistazakis, A.D. Tsigopoulos, and G.S. Tombras.
Mosharaka 1st International Conference on Electrical Engineering and Applications (MIC-Electrical 2014), Athens, Greece, April 4-6, 2014, ISSN: 2227-331X, pp. 48-53.
- [C27] **“Analytical Models for the Phase Shift of the Permittivity and Permeability for Magneto-Electric Lattice in Metamaterials”**.
H.M. Katiniotis, I.S. Karanasiou, E.A. Karagianni, H.E. Nistazakis, A.D. Tsigopoulos, and M.E. Fafalios.
Mosharaka 1st International Conference on Electrical Engineering and Applications (MIC-Electrical 2014), Athens, Greece, April 4-6, 2014, ISSN: 2227-331X, pp. 42-47.
- [C28] **“BER Estimation of Dual Hop QAM OFDM RoFSO Over Exponentially Modeled Turbulence and Optical Fiber with Nonlinear Clipping”**.
A.N. Stassinakis, M.P. Ninos, H.E. Nistazakis, S.S. Muhammad, A.D. Tsigopoulos, G.S. Tombras.
6th **International Conference from Scientific Computing to Computational Engineering** 6th IC-SCCE, Athens, 9-12 July, 2014, ISBN: 978-618-80527-3-4, vol. I, pp. 78-84, 2014.
- [C29] **“K Modeled Turbulence and Nonlinear Clipping for QAM OFDM with FSO and Fiber Serially Linked”**.
H.E. Nistazakis, A.N. Stassinakis, G.S. Tombras, S.S. Muhammad, A.D. Tsigopoulos.
20th International Conference on Microwaves, Radar, and Wireless Communications, (MIKON 2014), June 16-18, Gdansk, Poland, 2014.
- [C30] **“Average and Outage Capacity Estimation for Terrestrial FSO Links Over Gamma Modeled Turbulence Channels”**.
A.N. Stassinakis, H.E. Nistazakis, A.D. Tsigopoulos and G.S. Tombras.
Mosharaka 2nd International Conference on Electrical Engineering and Applications (MIC-Electrical 2015), Athens, Greece, April 3-5, 2015, ISSN: 2227-331X.
- [C31] **“BER Estimation For a PSK OFDM RoFSO Serially Relayed Link With Pointing Errors Over Gamma Gamma Turbulence Channels”**.
M.P. Ninos, H.E. Nistazakis, A.N. Stassinakis, A.D. Tsigopoulos and G.S. Tombras.
Mosharaka 2nd International Conference on Electrical Engineering and Applications (MIC-Electrical 2015), Athens, Greece, April 3-5, 2015, ISSN: 2227-331X.
- [C32] **“Comparison between Experimental and Theoretical Performance Results for Optical Wireless Links over Atmospheric Turbulence Channels Modeled with the Gamma Distribution”**.
S.H. Amar, H.E. Nistazakis, A.D. Tsigopoulos, E.A. Karagianni, M.E. Fafalios and G.S. Tombras.
6th **International Conference on Experiments/Process/System/Modeling/Simulation/Optimization** 6th IC-EpsMsO, Athens, 8-11 July, 2015, pp. 116-124.
- [C33] **“Outage Probability Estimation of a Serially Relayed OFDM RoFSO Links Over Exponentially Modeled Turbulence Channels with Spatial Jitter”**.
M.P. Ninos, H.E. Nistazakis, A.D. Tsigopoulos, G.P. Latsas, G.S. Tombras.
6th **International Conference on Experiments/Process/System/Modeling/Simulation/Optimization** 6th IC-EpsMsO, Athens, 8-11 July, 2015, pp. 338-345.
- [C34] **“Performance Estimation for Hybrid FSO/MMW Communication Systems under Gamma Modeled Turbulence Channels”**.
N. Pontikis, H.E. Nistazakis, G.P. Latsas, A.D. Tsigopoulos, G.S. Tombras.
6th **International Conference on Experiments/Process/System/Modeling/Simulation/Optimization** 6th IC-EpsMsO, Athens, 8-11 July, 2015, pp. 352-358.
- [C35] **“BER Estimation for a PSK OFDM Optical Wireless Link with Relays over Gamma Modeled Atmospheric Turbulence Channels”**.
D.A. Zervos, H.E. Nistazakis, G.P. Latsas, A.D. Tsigopoulos, G.S. Tombras.

6th International Conference on Experiments/Process/System/Modeling/Simulation/Optimization 6th IC-EpsMsO, Athens, 8-11 July, 2015, pp. 89-95.

- [C36] **“Outage Capacity Estimation of FSO Links with Pointing Errors Over Gamma Turbulence Channels”**.
Stassinakis, H.E. Nistazakis, G. Varotsos, G. Tombras, A. Tsigopoulos, V. Christofilakis, published in the IEEE MOCAS Conference Proceedings in 12-14 May 2016, Thessaloniki, Greece and awarded the title of best paper on Communication Systems.
- [C37] **“Maximally Flat Microstrip Band-Pass Filter Design for UWB Applications Using Step Impedance Techniques and Quarter-Wave Structures”**.
S.G. Zisis, E.A. Karagianni, H.E. Nistazakis, C.N. Vazouras, A.D. Tsigopoulos and M.E. Fafalios. 7th International Conference from “Scientific Computing to Computational Engineering” 7th IC-SCCE, Athens, 6-9 July, 2016, Vol. II, pp. 241-247.
- [C38] **“Optical Wireless Communication Links with Time Diversity over Log-Normal Turbulence Channels with Time Dispersion and Spatial Jitter”**.
G.K. Varotsos, H.E. Nistazakis, E.A. Katagianni, A.D. Tsigopoulos and G.S. Tombras. 7th International Conference from “Scientific Computing to Computational Engineering” 7th IC-SCCE, Athens, 6-9 July, 2016, Vol. II, pp. 322-328.
- [C39] **“DF Relayed FSO Communication Systems with Time Dispersion over Gamma Gamma Turbulence and Misalignment”**.
G.K. Varotsos, H.E. Nistazakis, M.P. Ninos, G.S. Tombras, A.D. Tsigopoulos, Ch.K. Volos. 6th International Conference on Modern Circuits and Systems Technologies (MOCAS), 4-6 May 2017, DOI: [10.1109/MOCAS.2017.7937688](https://doi.org/10.1109/MOCAS.2017.7937688).
- [C40] **“Influence Estimation of Vanadium dioxide Optical Filters at the Performance of Visible Light Communication Systems”**.
D.K. Manousou, A.N. Stassinakis, H.E. Nistazakis, G.S. Tombras, Ch.K. Volos, A.D. Tsigopoulos. 7th International Conference on Modern Circuits and Systems Technologies (MOCAS), 7-9 May 2018, DOI: [10.1109/MOCAS.2018.8376653](https://doi.org/10.1109/MOCAS.2018.8376653).
- [C41] **“Experimental Accuracy Investigation for Irradiance Fluctuations of FSO Links Modeled by Gamma Distribution”**.
D. Bourazani, A.N. Stassinakis, H.E. Nistazakis, G.K. Varotsos, A.D. Tsigopoulos and G.S. Tombras. 8th International Conference from “Scientific Computing to Computational Engineering” 8th IC-SCCE, Athens, 4-7 July, 2018.
- [C42] **“DF Relayed QAM or DBPSK FSO Links with Generalized Pointing Errors over Mixture Gamma Turbulence Channels”**.
N.A. Androutsos, H.E. Nistazakis, A.N. Stassinakis, A.D. Tsigopoulos and G.S. Tombras. 8th International Conference on Modern Circuits and Systems Technologies (MOCAS), 13-15 May 2019, Thessaloniki, Greece.
- [C43] **“Outage Performance Study of a Multi-Hop AF Relay System Approximated by a Dual Hop Scheme Over Rician Fading Wireless Channels”**.
K.N. Manganaris, N.A. Androutsos, A.N. Stassinakis, A.D. Tsigopoulos, A. Tzanakaki, H.E. Nistazakis. 8th International Conference on Experiments / Process / System Modeling / Simulation / Optimization (8th IC-EPSMSO), Athens, Greece, 3 - 6 July, 2019.
- [C44] **“Non Line of Sight Underwater Optical Wireless Communication Systems”**.
S. Menounou, A.N. Stassinakis, A.D. Tsigopoulos, H.E. Nistazakis, A. Tzanakaki and G.S. Tombras. International Conference on Experiments / Process / System Modeling / Simulation / Optimization (8th IC-EPSMSO), Athens, Greece, 3 - 6 July, 2019.
- [C45] **“Average BER Estimation of Retroreflective Transdermal Optical Wireless Links with Diversity, Attenuation and Spatial Jitter”**.
G.K. Varotsos, H.E. Nistazakis, K. Aidinis, F. Jaber, K. K. Mujeeb Rahman, A.D. Tsigopoulos, V. Christofilakis. 9th International Conference on Modern Circuits and Systems Technologies (MOCAS), Bremen, Germany, 7-9 September 2020, pp. 1-4, doi: [10.1109/MOCAS49295.2020.9200301](https://doi.org/10.1109/MOCAS49295.2020.9200301).
- [C46] **“An Empirical Expression for Attenuation Coefficient Evaluation of FSO Links During Night-Time Over Maritime Area of Piraeus Port in Greece”**.
A.N. Stassinakis, H.E. Nistazakis, E.V. Chatzikontis, G.D. Roumelas, G.S. Tombras, A.D. Tsigopoulos and G. Mkrtrchian. 9th International Conference on Modern Circuits and Systems Technologies (MOCAS), Bremen, Germany, 7-9 September 2020, pp. 1-4, doi: [10.1109/MOCAS49295.2020.9200271](https://doi.org/10.1109/MOCAS49295.2020.9200271).

- [C47] **“DF Relayed OOK and PAM FSO Links with Turbulence and Time Jitter”**.
P. Gripeos, H.E. Nistazakis, G. Roumelas, V. Christofilakis, A.D. Tsigopoulos and G.S. Tombras.
International Conference on Broadband Communications for Next Generation Networks and Multimedia Applications (CoBCom), Graz, Austria, 7-9 July 2020, pp. 1-7, doi: 10.1109/CoBCom49975.2020.9174183.
- [C48] **“ARESIBO HORIZON 2020 EUROPEAN RESEARCH PROJECT – ENRICHED SITUATION AWARENESS FOR BORDER SURVEILLANCE”**.
K. Charisis, A. Tsigopoulos, S. Kintzios, V. Papataxiarchis.
International Scientific Conference “Strategies XXI – Technologies – Military Applications – Simulation and Resources”, Bucharest, Romania, vol. 17, No. 1, March 18-19, 2021, doi: 10.53477/2668-2028-21-31.
- [C49] **“Hellenic Naval Academy and the Educational Tug of War - Traditional and Online Education in the Era of the Pandemic Crisis”**.
E. Rofousou, S. Kalligeros, A. Tsapalis, A. Tsigopoulos, A. Vantarakis.
International Symposium of Military Academies (ISOMA 2021 “Preparing Military Leaders to Effectively Resolve 21st Century Security Challenges”, Norwich University, Vermont, USA, October 4-8, 2021.
- [C50] **“Block Error Performance of PAM or PPM SIMO FSO Links Over Strong Turbulence Channels”**.
N.A. Androutsos, H.E. Nistazakis, A.N. Stassinakis, E.V. Chatzikontis, A.D. Tsigopoulos, E. Roditi, G.S. Tombras.
MOCAS T 10th International Conference on Modern Circuits and Systems Technologies 2021, pp. 1-4, DOI: [10.1109/MOCAS T52088.2021.9493398](https://doi.org/10.1109/MOCAS T52088.2021.9493398).
- [C51] **“Experimental Attenuation Coefficient Estimation for FSO Links Over Maritime Area During Summer Time”**.
G.A. Papavgeris, A.N. Stassinakis, H.E. Nistazakis, E.V. Chatzikontis, A.D. Tsigopoulos, V. Christofilakis.
MOCAS T 10th International Conference on Modern Circuits and Systems Technologies 2021, pp. 1-4, DOI: [10.1109/MOCAS T52088.2021.9493354](https://doi.org/10.1109/MOCAS T52088.2021.9493354).
- [C52] **“Time Jitter Influence on the Performance of PPM or PAM SIMO FSO Links over M-Turbulence Channels”**.
P.J. Gripeos, H.E. Nistazakis, G.K. Varotsos, W. Gappmair, A.D. Tsigopoulos.
ConTEL 2021 16th International Conference on Telecommunications, Zagreb, Croatia, June 30 – July 2, 2021, pp. 37-42, doi: 10.23919/ConTEL52528.2021.9495994.
- [C53] **“ABLER Estimation of SIMO FSO Links over Saturated Turbulence and Spatial Jitter”**.
N.A. Androutsos, A.N. Stassinakis, A.D. Tsigopoulos, C.N. Vazouras.
9th International Conference on Experiments/Process/System Modeling/Simulation/ Optimization, 9th IC-EpsMsO Athens, July 7-10, 2021.
- [C54] **“Availability of UOWC Links Impaired by the Chromatic Dispersion and the Time Jitter Effect Modeled with the Truncated Normal Distribution”**.
B. Dulla, H.E. Nistazakis, A.D. Tsigopoulos, G. Mkrtrchian, G.S. Tombras.
9th International Conference on Experiments/Process/System Modeling/Simulation/ Optimization, 9th IC-EpsMsO Athens, July 7-10, 2021.
- [C55] **“BER Performance Estimation for SIMO FSO Links with Time Jitter over Exponential Turbulence Channels”**.
P.J. Gripeos, H.E. Nistazakis, A.D. Tsigopoulos, G. Mkrtrchian, G.S. Tombras.
9th International Conference on Experiments/Process/System Modeling/Simulation/ Optimization, 9th IC-EpsMsO Athens, July 7-10, 2021.
- [C56] **“Experimental Attenuation Detection for Maritime FSO Link under Weak Wind Conditions”**.
A.N. Stassinakis, A.D. Tsigopoulos, G.A. Papavgeris, S.Q. Jaradat.
9th International Conference on Experiments/Process/System Modeling/Simulation/ Optimization, 9th IC-EpsMsO Athens, July 7-10, 2021.
- [C57] **“Configurable Multi-Frequencies Microstrip Square Spiral Antenna RFID Tag at S and C-BAND with Different Substrates”**.
T. Korfiati, E. Karagianni, S. Stavrinidis, A. Tsigopoulos, G. Stavrinidis, A. Kostopoulos, A. Arapogianni
9th International Conference on Experiments/Process/System Modeling/Simulation/ Optimization, 9th IC-EpsMsO Athens, July 7-10, 2021.
- [C58] **“Measuring the Radar Cross Section of Carbon Fiber Reinforced Composite Panels in a Non-Anechoic Environment”**.
C.N. Vazouras, A. Polymerou, S. Kyriakou, A.D. Tsigopoulos, E.A. Karagianni, A.S. Paipetis, N. Melanitis.

9th International Conference on Experiments/Process/System Modeling/Simulation/ Optimization, 9th IC-EpsMsO Athens, July 7-10, 2021.

- [C59] **“ARESIBO – Augmented Reality Enriched Situation Awareness for Border Security. O Contributo da Marinha”**.
V. Conceição, M. Pereira, R. Moreira, S. Brioso, A. Tsigopoulos.
3^o Encontro de Investigação e Desenvolvimento em Ciências Militares, (Annual Military Research and Innovation Meeting), Academia Militar – Campus da Amadora, Portugal, November 22, 2021, <https://academiamilitar.pt/ecm2021.html>.
- [C60] **“Outage Performance of FSO Links with chirped Gaussian pulses and truncated modeled Time Jitter”**.
D. Kriempardis, P.J. Gripeos, E. Kapotis, H.E. Nistazakis, A.D. Tsigopoulos, Ch.K. Volos.
MOCAS 11th International Conference on Modern Circuits and Systems Technologies 2022, Bremen, Germany 8 – 10 June 2022.
- [C61] **“Gamma Gamma Turbulence and Nonzero Boresight Spatial Jitter Influence at the Outage Performance of THz Links”**.
G.K. Varotsos, E.V. Chatzikontis, H.E. Nistazakis, K. Aidinis, A.D. Tsigopoulos, V. Christofilakis.
CobCom2022, Graz University of Technology, Austria, July 12-14, 2022.
- [C62] **“Estimation of Availability for Water-To-Air Optical Wireless Communication Link through Wavy Water Surface”**.
A.N. Stassinakis, E.V. Chatzikontis, E. Kapotis, A.D. Tsigopoulos, C.N. Vazouras, G. Mkrtrchian and H.E. Nistazakis.
10th International Conference from “Scientific Computing to Computational Engineering”
10th IC-SCCE, Athens, 6-9 July, 2022.
- [C63] **“Weak Turbulence Influence in the Average BLER of SIMO FSO Links”**.
N.A. Androutsos, A.D. Tsigopoulos, E. Kapotis, G. Mkrtrchian and G.S. Tombras.
10th International Conference from “Scientific Computing to Computational Engineering”
10th IC-SCCE, Athens, 6-9 July, 2022.
- [C64] **“An Experimental FSO/MMW/RF Hybrid Wireless Communications Link Setup over Urban Area”**.
E.V. Chatzikontis, A.D. Tsigopoulos, A.N. Stassinakis, A. Lionis, C.N. Vazouras and H.E. Nistazakis.
10th International Conference from “Scientific Computing to Computational Engineering”
10th IC-SCCE, Athens, 6-9 July, 2022.
- [C65] **“Expected Irradiance of FSO Links with Chromatic Dispersive, and Laplace Time-Jittered Gaussian Pulses”**.
P.J. Gripeos, D. Oreinos, D. Kriempardis, A.D. Tsigopoulos, E. Kapotis, C.N. Vazouras and H.E. Nistazakis.
10th International Conference from “Scientific Computing to Computational Engineering”
10th IC-SCCE, Athens, 6-9 July, 2022.
- [C66] **“Designing Assessment Activities Based on the Framework of “Three-Dimensional Learning”: The Case of Gravitational Forces”**.
M. Papakonstantinou, M. Skoumios, A.D. Tsigopoulos.
10th International Conference from “Scientific Computing to Computational Engineering”
10th IC-SCCE, Athens, 6-9 July, 2022.
- [C67] **“ARESIBO – Augmented Reality Enriched Situation Awareness for Border Security. Evaluation Framework and Results of Large-Scale Trials”**.
V. Conceição, A. Tsigopoulos, S. Toivonen.
ECM2022 (4.^o Encontro de I&D em Ciências Militares), Academia da Força Aérea, Granja do Marquês, 2715-021 Pêro Pinheiro, Portugal, 16 November, 2022.

12. INVITED SPEAKER

- 1) Invited Tutorial Talk at the Mosharaka 1st International Conference on Electrical Engineering and Applications (MIC-Electrical 2014), Athens, Greece, April 4-6, 2014: **“Possibilities and Main Challenges of Underwater Optical Wireless Communication Systems”**, Friday, April 4, 2014.
- 2) Invited Speaker of the Erasmus+ ICM Staff Mobility workshop at JUST (Jordan Institute of Science and Technology) Faculty of Engineering: **Visible Light Communications**, 1-5 March 2020.

13. SUPERVISOR OF Ph.d. THESES

- Member of the Consulting Committee for the supervision of Maria Lekanidi's Ph.D. Thesis: «Signal propagation in wireless optical systems, with emphasis on systems operating in visible lightwaves for

indoor and outdoor environments with possible use of regenerators and diversity techniques», Physics Department of Athens University.

- Member of the Consulting Committee for the supervision of Stratis Chatzikontis Ph.D. Thesis: «Experimental and Theoretical Study of Wireless Optical Signal Propagation at Infrared Wavelengths », Physics Department of Athens University.
- Member of the Consulting Committee for the supervision of Antonios Lionis Ph.D. Thesis: «Wireless Optical Communications», Department of Informatics and Telecommunications of the University of Peloponnese.
- Member of the Examining Committee of Ghassan Frache Ph.D. Thesis: «Developing Constructively Aligned Learning –by- Doing Model Incorporating 21st Century Skills, for Enhancing the Teaching of Engineering and Science Curriculum in Higher Education», 2019.
- Member of the Consulting Committee for the supervision of Kyriakos Gouskos - Katsaros Lionis Ph.D. Thesis: «Analysis of Synergistic Operation of a Constellation of Nano-Satellites in Low Earth Orbit with a Team of Unmanned Aerial Vehicles Operating with Swarm Characteristics με University of West Attica.

14. JOURNAL REVIEWER

- IEEE Access (<https://ieeaccess.ieee.org>).
- IEEE Photonics Journal (<https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=4563994>)
- IET Microwaves, Antennas & Propagation (<http://www.theiet.org/resources/journals/index.cfm>).
- Journal of the Franklin Institute (Engineering and Applied Mathematics – www.elsevier.com).
- Journal of Engineering and Computer Innovations (www.academicjournals.org/JECI).
- Herald Journal of Electrical and Electronics Engineering (www.heraldjournals.org).
- International Journal of Electronics (<http://www.tandfonline.com/loi/tetn20#.UwxTuuOSxLs>).
- Optik International Journal for Light and Electron Optics, Elsevier (<https://www.journals.elsevier.com/optik>)
- MDPI Electronics International Journal on the Science of Electronics and its Applications (<https://www.mdpi.com/journal/electronics>)
- MDPI Applied Sciences International Journal on All Aspects of Applied Natural Sciences (<https://www.mdpi.com/journal/applsci>)
- MDPI Technologies International Journal on Emerging Scientific and Technological Trends (<https://www.mdpi.com/journal/technologies>)
- MDPI Future Internet International Journal on Internet Technologies and the Information Society (<https://www.mdpi.com/journal/futureinternet>)
- MDPI Sensors International Journal on Internet Technologies and the Information Society (<https://www.mdpi.com/journal/sensors>)
- MDPI Photonics International Journal on the Science and Technology of Optics and Photonics (<https://www.mdpi.com/journal/photonics>)
- MDPI Symmetry International Journal on Research on Symmetry/Asymmetry Phenomena wherever they occur in All Aspects of Natural Sciences (<https://www.mdpi.com/journal/symmetry>)

15. PROJECT REVIEWER

- Invited reviewer for the Research and Innovation Contest 2010, from Eurobank and the Union of Industries and Enterprises of Greece.
- Invited reviewer of the evaluation of new Serbian national project proposals 2010, from the Ministry of Science and Technological Development of the Republic of Serbia.
- Accredited Auditor of the Auditors Board for the actions of “Digital Convergence” of the National Strategic Reference Framework (NSRF).
- Auditor on behalf of the Ministry of Economy for the following projects:
 1. NATIONAL NETWORK OF PUBLIC GOVERNMENT “SYZEFKSIS” (MIS 75717).
 2. Funding of enterprises for the creation of wireless broadband access points (MIS 91073).
 3. Funding of enterprises for the implementation of advanced broadband telecommunication services projects (MIS 105228).

4. INTERREG III B ARCHIMED – CORI: PREVENTION AND MANAGEMENT OF SEA ORIGINATED RISKS TO THE COASTAL ZONE. PROJECT Code: CORI.
5. INTERREG III B ARCHIMED – MEDIA TERRA: ESTABLISHING A MEDIA OBSERVATORY FOR STRENGTHENING THE CIVIL PROTECTION IN THE CENTRAL AND SOUTHEASTERN MEDITERRANEAN BASIN. PROJECT Code: MEDIA TERRA.
6. INTERREG III B ARCHIMED – MEDTOURNET: INTEGRATED AND SUSTAINABLE MANAGEMENT OF CULTURAL AND NATURAL RESOURCES AND OF LANDSCAPES AND RISK MANAGEMENT. PROJECT Code: MEDTOURNET.
7. INTERREG III B ARCHIMED – NETWET 3: NEW FORMS OF TERRITORIAL GOVERNANCE FOR THE PROMOTION OF LANDSCAPE POLICIES IN THE FIELD OF WATER RESOURCES MANAGEMENT AT WATER TERRITORIES. PROJECT Code: NETWET 3.
8. INTERREG III B ARCHIMED – SCORENET: NETWORK FOR THE SUSTAINABILITY AND COMPETITIVENESS OF REGIONS. PROJECT Code: S.CO.RE.-NET
9. INTERREG III B MEDOC – MYTIMED: DEVELOPPEMENT D'UN RESEAU INTERREGIONAL DE SURVEILLANCE DE LA QUALITE DES EAUX COTIERES PAR DES BIO-INTEGRATEURS POUR LA PROTECTION DURABLE DE LA MEDITERRANEE ORIENTALE. PROJECT Code: MYTIMED.
10. INTERREG III B MEDOC – URBACOST: URBANISATION COTIERE ET ZONES RURALES A HAUTE STRUCTURATION HISTORIQUE: UN MODELE D' INTERVENTION "URBACOST". PROJECT Code: URBACOST.

- Deputy Chairman of Technical Offers Evaluation Committee of No 13263/30-6-2006 Tender: "Procurement, Installation and Maintenance of Work Stations for the Integrated Information System of Fiscal Policy".
- Chairman of Technical Offers Evaluation Committee of No 10744/28-03-2012 Tender: "Development of interactive digital services platform for the promotion of cultural content libraries and museums of Corgialenios Foundation and their integration in educational digital applications", PROJECT Code: 300639.
- Chairman of Technical Offers Evaluation Committee of No 5571/30-4-2013 Tender: "Electronic Services of Citizens Identification and Authentication (e-TΑΠ)", PROJECT Code: 296674.
- Auditor of ICT4GROWTH Action (Information Society SA Decision No: 8466/5-7-2013): "Support of Enterprises for the Implementation of Investment Projects for the Development - Provision of Innovative Products and Value Added Services (ICT4GROWTH)".
- Expert of the Hellenic National Defense General Staff, providing consulting services for the research project "ACRITAS" that is developed by the Hellenic Armed Forces in collaboration with the Research Unit «Corallia» of the Research Center «Athena», in the context of the program «Creation of Innovative Business Clusters» of the General Secretariat of Research and Technology, aiming at the development of the Greek Cooperative Formation of Space Technology & Applications (si-Cluster). The project ACRITAS lasts for 24 months and started on December 2013. It concerns the Research, Design, Development and Assessment of integrated applications for supervision and monitoring of sea and border frontiers, critical energy infrastructures, environmental coastal pollution and cultural spaces, through technologies of data fusion from a multiple system of advanced sensors.

16. GUEST EDITOR OF SPECIAL ISSUE JOURNAL

Guest Editor of the Special Issue, ISSN: 2079-9292, of the online journal **MDPI Electronics**. Special Issue Title: "**Emerging Application of Optical Wireless Communication Technologies in 6G Communication**", November 2021.

17. SCIENTIFIC COMMITTEES

- Invited member of the Scientific Committee of the **3rd International Conference on Experiments/Process/System Modeling/Simulation/Optimization (IC-EpsMsO 2009)**, Athens, July 8-11, 2009.
- Invited member of the Scientific Committee of the **4th International Conference from Scientific Computing to Computational Engineering (IC-SCCE)**, Athens, July 7-10, 2010.
- Invited Reviewer of the **Communications and Computer Networks (CCN), (MIC-CNIT 2010) Track του 4th Mosharaka International Conference on Communications, Networking and Information Technology**, Amman, Jordan, December 3-5, 2010.
- Invited Reviewer of the **Communications and Computer Technologies (CCT), (MIC-CCA 2011) Track του 4th Mosharaka International Conference on Communications, Computers and Applications**, Istanbul, Turkey, July 22-24, 2011.

- Invited member of the Scientific Committee of the (TPC – Technical Program Committee) **Spread Spectrum Communications (SSC) Track του Mosharaka International Conference on Communications, Signals and Coding (MIC-CSC 2011)**, Larnaca, Cyprus, October 7-9, 2011.
- Invited member of the Scientific Committee of the **4th International Conference on Experiments/Process/System Modeling/Simulation/Optimization (IC-EpsMsO 2011)**, Athens, July 6-9, 2011.
- Invited member of the Scientific Committee of the (TPC – Technical Program Committee) **Optical Fiber Communications (OFC) Track του Mosharaka International Conference on Communications, Propagation, and Electronics (MIC-CPE 2012)**, Istanbul, Turkey, February 3-5, 2012.
- Προσκεκλημένο Μέλος της Οργανωτικής Επιτροπής του **Spread Spectrum Communications (SSC) track of Mosharaka International Conference on Communications, Signals and Coding (MIC-CSC 2012)**, Istanbul, Turkey, October 12-14, 2012.
- Invited member of the Scientific Committee of the **5th International Conference from Scientific Computing to Computational Engineering (IC-SCCE)**, Athens, July 4-7, 2012.
- Invited member of the Scientific Committee (Editorial Board) of the **Herald Journal of Electrical and Electronics Engineering**.
- Invited member of the Scientific Committee (Track Chairman) and (TPC – Technical Program Committee) of the **Optical Communication Systems and Networks (OCSN) Track του Mosharaka 1st International Conference on Telecommunication Systems and Networks (MIC-Telecom 2013)**, Barcelona, Spain, December 20-22, 2013.
- Invited member of the Scientific Committee of the **5th International Conference on Experiments/Process/System Modeling/Simulation/Optimization (IC-EpsMsO 2013)**, Athens, July 3-6, 2013.
- Invited member of the Scientific Committee (Track Chairman) and (TPC – Technical Program Committee) of the **Wireless Optical Communications (WOC) Track του Mosharaka 1st International Conference on Wireless Communications and Mobile Computing (MIC-WCMC 2014)**, Amman, Jordan, June 20-22, 2014.
- Invited member of the Technical Committee (TPC – Technical Program Committee) of **Optical Communication Systems and Networks (OCSN) Track του Mosharaka 2nd International Conference on Telecommunication Systems and Networks (MIC-Telecom 2014)**, Istanbul, Turkey, 19-21 December 2014.
- Invited member of the Scientific Committee of the **6th International Conference on Experiments/Process/System Modeling/Simulation/Optimization (IC-EpsMsO 2015)**, Athens, July 8-11, 2015.
- Invited member of the Scientific Committee (Track Chairman) and (TPC – Technical Program Committee) of the **Communication Systems and Applications (CSA) Track του Mosharaka 2nd International Conference on Electrical Engineering and Applications (MIC-Electrical 2015)**, Athens, Greece, April 3-5, 2015.
- Invited member of the Technical Committee (TPC – Technical Program Committee) of the **Communication Systems and Technologies (CST) Track του Mosharaka 7th International Conference on Communications, Computers and Applications (MIC-CCA 2015)**, Amman, Jordan, 11-13 May 2015.
- Invited member of the Technical Committee (TPC – Technical Program Committee) of the **Wireless Optical Communications (WOC) Track του Mosharaka 2nd International Conference on Wireless Communication Systems and Networks (MIC-Wireless 2015)**, Barcelona, Spain, 22-24 June 2015.
- National Representative of Hellenic Navy at NATO Working Group: **AC/322 LIGHT OF SIGHT COMMUNICATIONS – ΕΠΙΚΟΙΝΩΝΙΕΣ ΟΠΤΙΚΗΣ ΕΠΑΦΗΣ** for the year 2015.
- Invited member of the Scientific Committee of the **6th International Conference from Scientific Computing to Computational Engineering (IC-SCCE)**, Athens, July 6-9, 2016.
- Invited member of the Scientific Committee of the **7th International Conference on Experiments/Process/System Modeling/Simulation/Optimization (IC-EpsMsO 2017)**, Athens, July 5-8, 2017.
- Invited member of the Scientific Committee of the **8th International Conference on Experiments/Process/System Modeling/Simulation/Optimization (IC-EpsMsO 2019)**, Athens, July 3-6, 2019.

- Invited member of the Technical Committee (Microwaves, Antennas and Propagation (MAP) Committee) of the **1st International Congress on Engineering Technologies (EngiTek 2020) του Mosharaka for Research and Studies**, 14-16 April 2020, Irbid, Jordan.
- Invited member of the Technical Committee (TPC – Technical Program Committee) of the **Mosharaka 1st International Conference on Emerging Applications of Electrical Engineering (MIC-Electri-cApps 2020)**, Valencia, Spain, 4-6 September 2020.
- Invited member of the Technical Committee (TPC – Technical Program Committee) of the **Electronics and Communication Systems Track του Mosharaka 12th International Conference on Information and Communication Systems (ICICS 2021)**, Valencia, Spain, 24-26 May 2021.
- Invited member of the Technical Committee (TPC – Technical Program Committee) of the **2021 Global Congress on Electrical Engineering (GC-ElecEng 2021) του Mosharaka 3rd International Conference on Telecommunications, Systems and Networks (MIC-Telecom 2021)**, Valencia, Spain, 10-12 December 2021.
- Invited member of the Scientific Committee of the του **9th International Conference on Experiments/Process/System Modeling/Simulation/Optimization (IC-EpsMsO 2021)**, Athens, July 7-10, 2021.

18. RESEARCH PROJECTS

1. Evolution towards an optical network layer / EURESCOM P615.
2. Integrated Optoelectronics towards the Coherent Multichannel IBCN / RACE-1027.
3. Modelling and Measuring Advanced Photonic Components for Telecommunications / COST 240.
4. OptoElectronic Integrated Circuit Modules for the Access Network / RACE OMAN 2073.
5. Broadband Lightwave Sources and Systems / ACTS BLISS AC065.
6. VERTical cavity laser Technology for InterConnection and Access Links / ACTS VERTICAL AC024.
7. Automated measurements of characterization and simulation of optoelectronic devices / Hellenic General Secretariat of Research & Technology 91 ΕΔ 286.
8. Dynamics of linear waves in optical waveguides with inhomogeneities and discontinuities / Hellenic General Secretariat of Research & Technology 95 ΕΔ 1242.
9. Free Space Wireless Optical System. Joint Research Project between Hellenic Naval Academy and Physics Department of University of Athens. The link has been installed and the system is operating at 100 Mbps 0,86 μm wavelength, since 2011. It covers a distance of 3 km between two sites of the Hellenic Navy and measurements are performed and tested with theoretical predictions on a 24/7 basis.
10. Augmented Reality Enriched Situation awareness for Border security ARESIBO – horizon 2020 (April 2018 - today).
11. Fully Customizable simulation software for thermal visualization, PICTUM, Code No T2EΔK-03941, «RESEARCH – CREATE – INNOVATE 2ND CYCLE», (ΕΠΑveK 2014-2020).