

INFORMAZIONI PERSONALI

Janneh Mohammed

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Sesso Maschile | Data di nascita 24/04/1982 | Nazionalità Gambiana, Permanent Resident:Italy

POSIZIONE RICOPERTA

CODICE 9: Settore scientifico disciplinare: ING-INF/01 – Elettronica.ESPERIENZA
PROFESSIONALE

09/04/2018–30/04/2019

Postdoctoral Researcher

Institute of Photonics and Electronics, Prague (Cechia)

- Developing and designing an advanced optical platform based on Nanobiophotonic for future health care
- Designing and numerical modeling of optical metasurfaces, optical waveguides, plasmonic nanoantennas, and photonic devices
- Statistical data analysis and interpretation
- Optical setups for Nano/microdevices characterization
- Material optical properties characterization using spectroscopic ellipsometry measurement techniques
- Collaborating with other departments in drafting and writing projects proposal
- Writing reports and presenting findings through talks and presentations
- Contributing to the generation of new ideas/publications

15/08/2016–25/11/2016

Visiting Research Scholar

Institute of Photonics, University of Eastern Finland, Joensuu (Finlandia)

- Optical metrology, nanofabrication processes, and device physics
- Material optical properties characterization using spectroscopic ellipsometry measurement techniques

15/04/2013–30/11/2013

Ingegnere della ricerca

Intecs-Ex TechnoLab SrL, L'Aquila (Italia)

- Investigating and Implementing an experimental setup for characterizing Fiber Bragg Gratings (FBG) sensors for strain

01/08/2017–31/03/2018

Teacher and Mentor

Arichiccoglie e Mondipossibi (NGO), L'Aquila (Italia)

- Information Technology courses

- 01/09/2007–31/08/2010 Senior Lecturer
QuantumNET Institute of Technology, Serrekunda (Gambia)
- Information Technology courses
- 01/09/2007–31/08/2010 Teaching assistant
QuantumNET Institute of Technology/University of the Gambia, Serrekunda (Gambia)
- I was responsible to conduct tutorial classes, supervise exams, help to mark exam papers, and organizing visiting office hours for the following courses:
- Basic Statistics
 - Introduction to Computer science
 - Introduction to Matlab
 - Linear Algebra 1 and 2
 - 2008 Calculus 1 and 2

ISTRUZIONE E FORMAZIONE

- 01/2014–07/2017 Doctorate Degree in Electrical and Electronic Engineer
(Nanophotonics)
University of L'Aquila, L'Aquila (Italia)
- **Thesis Title:** High Sensitivity High-Resolution Metasurface Based Photonic Devices for Detection of Chemical and Biological Substances
 - **Supervisors:** Professor Elia Palange and Prof. Andrea De Marcellis
- 11/2012–09/2013 Pre-doctoral fellow
University of L'Aquila, L'Aquila (Italia)
Modeling and numerical simulation of Fiber Optical for Sensor Applications
- 09/2010–06/2012 M.Sc., Mathematical Modelling Engineering, Theory, Numeric, and Application
University of L'Aquila, L'Aquila (Italia)
- **Thesis Title:** Modeling Nonlinear Propagation in Multi-Mode Fibers with Random Mode Coupling
 - **Specialization:** Modelling and numerical simulation of semiconductor and electronic devices
 - **Supervisors:** Professor Antonio Mecozzi
- 04/2011–09/2011 M.Sc., Mathematical Modelling Engineering, Theory, Numeric, and Application
University of Hamburg, Hamburg (Germania)
- **Specialized:** Numerical Method of PDEs and Algorithms and DataStructure
- 09/2004–09/2008 B.Sc in Physics
University of the Gambia, Serrekunda (Gambia)

COMPETENZE PERSONALI

Lingua madre inglese

Lingue straniere	COMPRESIONE		PARLATO		PRODUZIONE SCRITTA
	Ascolto	Lettura	Interazione	Produzione orale	
italiano	B2	B2	B2	B2	B2
francese	A2	A2	A2	A2	A2

Livelli: A1 e A2: Utente base - B1 e B2: Utente autonomo - C1 e C2: Utente avanzato
 Quadro Comune Europeo di Riferimento delle Lingue - Scheda per l'autovalutazione

- Competenze professionali
- Electromagnetic Computer Simulation (CST Studio)
 - COMSOL Multiphysics Electromagnetic Simulations (WaveOptics Modules)
 - FDTD Simulation Software - Lumerical FDTD Ins
 - Matlab, Python, and Visual Basic
 - Optical fabrication, ellipsometry characterization, and measurement
 - Surface plasmon resonance (SPR) spectroscopy
 - Surface enhanced infrared spectroscopy
 - FTIR spectroscopy
 - Optical experiment setup, data acquisition, interpretation, and presentations

Competenze digitali

AUTOVALUTAZIONE				
Elaborazione delle informazioni	Comunicazione	Creazione di Contenuti	Sicurezza	Risoluzione di problemi
Utente avanzato	Utente avanzato	Utente avanzato	Utente avanzato	Utente avanzato

Competenze digitali - Scheda per l'autovalutazione

- Very good command of Microsoft Office Suite (i.e., Word, Powerpoints, Excel, Access, and Publisher)
- Windows and Linux operating systems

Patente di guida B

ULTERIORI INFORMAZIONI

Riconoscimenti e premi

- 2018 – Postdoctoral Fellowship, Czech Science Foundation-Czech Republic)
- 2016 – Research Mobility Grant, University of L'Aquila-Italy
- 2014 – Doctoral Research Scholarship, Italian Government-Ital
- 2010 – Joint M.Sc Degree, MATHMODS Consortium Scholarship, University of L'Aquila and University of Hamburg, Germany
- 2004 – Port Authority Scholarship for Sciences, the Gambian

Pubblicazioni

Journals

- [1] Di Meo, V., Caporel, A., Crescitelli, A., **Janneh, M.**, Palange, E.; Marcellis, A.D.; Portaccio, M.; Lepore, M.; Rendina, I.; Ruvo, M.; Esposito, M. (2019). Metasurface based on Cross-Shaped Plasmonic Nanoantennas as Chemical Sensor for Surface Enhanced Infrared Absorption Spectroscopy. Sensors and Actuators B: Chemical 286. **IF: 6.393**
- [2] **Janneh, M.**; Marcellis, A.D.; Palange, E.; Tenggara, A.T.; Byun, D. (2018). Design of Terahertz Plasmonic Metasurface-Based Dual-Band Absorber with Very High-Quality Factors for Chemical and

- Biological Sensing Applications, Optics Communications 416:152 **IF: 1.961**
- [3] Ferranti, F.; Marcellis, A.D.; **Janneh, M.**; Palange, E.; Antonini, G. (2016). DA metamodelling technique for the efficient design optimization of metasurfaces. Electronics Letters. 52(4):11 **IF: 1.343**
- [4] De Marcellis, A., Palange, E., **Janneh, M.**; Rizza, C.; Ciattoni, A.; Mengali, S. (2017). Design Optimisation of Plasmonic Metasurfaces for Mid-Infrared High-Sensitivity Chemical Sensing, Plasmonics. **IF: 2.926**
- [5] De Marcellis, A., **Janneh, M.**; Palange, (2015). High-Sensitivity High-Resolution Optical Phase Shift Detection Technique Using Si Photodiode Operating in Photovoltaic Mode. IEEE Sensors Journal .15 ,12 **IF: 3.076**
- [6] De Marcellis, A., **Janneh, M.**; Palange, (2015). Very high-sensitivity tunable phase detection of light power variations using electrical modulation of Si-photodiode in the photovoltaic regime. Electronics Letters. 51 (3) **IF: 1.343**

Conferences

- [1] Di Meo, V., Caporel, A., Crescitelli, A., **Janneh, M.**, Palange, E.; Marcellis, A.D.; Portico, M.; Lepore, M.; Rendina, I.; Ruvo, M.; Esposito, M. (SIE 2018). Plasmonic Nanoantennas Array For Infrared Absorption Spectroscopy. 50 *the Annual Meeting of the Associazione Società Italiana di Elettronica*, Napoli (Italy)
- [2] Di Meo, V., Caporel, A., Crescitelli, A., Sandomenico, A.; **Janneh, M.**, Palange, E.; Marcellis, A.D.; Portaccio, M.; Lepore, M.; Rendina, I.; Ruvo, M.; Esposito, M. (2018). Plasmonic midinfrared nanoantennas for Surface-Enhanced InfraRed Absorption spectroscopy. XIV EUROPTRODE, Napoli (Italy)
- [3] **Janneh, M.**; Marcellis, A.D.; Palange, E.; Tenggara, A.T.; Byun, D. (2017) MetasurfaceBased THz DualBand Absorber Sensor for the Measurement of Refractive Index Variations of Chemical and Biological Substances. Proceedings 1(4), 558, DOI: 10.3390/proceeding
- [4] **Janneh, M.**; Marcellis, A.D.; Palange, E.; Tenggara, A.T.; Byun, D. (2017) High Q factor dual-band tunable polarization-independent THz flexible metasurface for chemical sensing applications. 8th International Conference on Metamaterials, Photonic Crystals and Plasmonics - META'17At: Incheon – Seoul (South Korea)
- [5] **Janneh, M.**; Marcellis, A.D.; Palange, E.; (2016). Bandwidth Optimisation and Frequency Tuning of Plasmonic Metasurfaces for Optical Sensing of Chemical and Biological Substance. Procedia Engineering (Eurosensors). <https://doi.org/10.1016/j.proeng.2016.11.364>
- [6] De Marcellis, A., Palange, E., **Janneh, M.**; Rizza, C.; Ciattoni, A.; Mengali, S. (2015). Optimization of the detection sensitivity of plasmonic nanoantenna based sensors for midinfrared spectroscopic applications. Procedia Engineering (Eurosensors). <https://doi.org/10.1016/j.proeng.2015.08.779>.
- [7] De Marcellis, A.; Palange, E.; Giuliani, R.; **Janneh, M.** (2014). Very high sensitivity electrically modulated Siphotodiode in photovoltaic-mode as a phase-sensitive detector of light power. Procedia IEEE SENSORS. DOI: 10.1109/ICSENS.2014.6985201

Technical Reports

- [1] **Janneh, M.**; De Marcellis, A.; Palange, E.; Rizza, C.; Ciattoni, A.; Mengali, S. Modeling of Nanoantenna-Based Optical Sensors for High-Sensitivity High-Resolution Infrared Spectroscopy of Chemical Compounds. Lecture Notes in Electrical Engineering, DOI:10.1007/978-3-319-09617-919

Posters

- [1] **Janneh, M.**; De Marcellis, A.; Palange. (2014). Surface-Enhanced Infrared Absorption (SEIRA) of Silicon Nitride onto Plasmonic Nanoantenna Arrays. MaMoW14, University of L'Aquila, Italy.
- [2] **Janneh, M.**; Marcellis, A.D.; Palange, E.; (2016). Bandwidth Optimisation and Frequency Tuning of Plasmonic Metasurfaces for Optical Sensing of Chemical and Biological Substance. (Eurosensors).

Appartenenza a gruppi / associazioni

- 2016 -To Date MathMods Alumni Signature member
- 2014 -2018 : Laser Optics : Ordinary Member
- 2011-To Date: Country representative : Erasmus Mundus Students' and Alumni's Association : EMA
- 2005-2010: Deputy Coordinator : ITC Center Global Unification The Gambia Chapter

Referenze

Prof. Jiří Homola, Ph.D., DSc.

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Team leader: Optical Biosensors

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Professor Elia Palange

Nanophotonics Laboratory

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Trattamento dei dati personali

Autorizzo il trattamento dei dati personali contenuti nel mio curriculum vitae in base all'art. 13 del D. Lgs. 196/2003 e all'art. 13 del Regolamento UE 2016/679 relativo alla protezione delle persone fisiche con riguardo al trattamento dei dati personali.

Firma
