

# **PROFESSOR GABRIEL-MIRO MUNTEAN - CURRICULUM VITAE**

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## **CAREER PROFILE:**

**Position:** Professor - School of Electronic Engineering, Dublin City University  
**Co-Director:** DCU Performance Engineering Laboratory (PEL@DCU), Ireland  
**Coordinator:** EU Horizon 2020 large-scale project NEWTON (<http://newtonproject.eu>)  
**Consultant Professor:** Beijing University of Posts and Telecommunications, China  
**Area Editor:** Multimedia Comms. IEEE Communications Survey & Tutorials (impact factor 25.249)  
**Associate Editor:** IEEE Transactions on Broadcasting (impact factor 3.863)  
**Teaching:** "Software Development (Undergraduate), "Network Performance" (Masters)  
**Research Metrics:** over 450 publications (4 author books; 159 journals); 8500+ citations; H-index=52  
**Research Areas:** Adaptive multimedia networking, energy and performance-aware communications in heterogeneous networks, eco-friendly transportation, performance-aware technology-enhanced learning, performance of IoT systems

## **EDUCATION:**

**Ph. D. - 2003** thesis: "Quality-Oriented Adaptation Scheme for Multimedia Streaming in Local Broadband Multi-Service IP Networks" Dublin City University, Ireland  
**M. Eng. - 1997** First Class Honours, "Politehnica" University Timisoara, Romania, CS Department  
**B. Eng. - 1996** First Class Honours, "Politehnica" University Timisoara, Romania, CS Department

## **WORK EXPERIENCE:**

**Oct. 2020 - present** Professor, School of Electronic Engineering, Dublin City University, Ireland  
**July 2017 – Oct. 2020** Associate Professor, School of Electronic Engineering, Dublin City University, Ireland  
**Oct. 2013 - June 2017** Senior Lecturer, School of Electronic Engineering, Dublin City University, Ireland  
**Oct. 2003 - Sept. 2013** Lecturer, School of Electronic Engineering, Dublin City University (DCU), Ireland  
**Oct. 2000 - Sept. 2003** Research Demonstrator, Computer Science Department, UCD, Ireland  
**Oct. 1998 - Sept. 2000** Research Assistant, School of Electronic Engineering, DCU, Ireland  
**Oct. 1996 - Oct. 2001** Assistant Lecturer, "Politehnica" University of Timisoara, Romania  
**Dec. 1996 - Sept. 1998** Head of IT Department, "Cereacom Timis" SA, Timisoara, Romania

## **SUPERVISION AND GRADUATES:**

**Current Supervision:** 8 PhDs: Fabio Silva, Bharat Agarwal, Devanshu Anand, Yashar Farzaneh, Muhammad Fardad, Syed Haseeb Ul Hassan (all at DCU), Daragh King (TCD) and Gearoid Reilly (NUIG Ireland)  
3 Postdocs: Dr Mohammed Togou, Dr Anderson Simiscuka, Dr. Abid Yaqoob  
**Graduates:** 25 PhDs, 5 Masters by research and 104 taught Masters project students

## **RESEARCH AWARDS (20):**

**October 2020** Best Student Paper Award, IEEE BMSB Conference, Paris, France  
**September 2019** Lero Director Prize for Research Excellence, Ireland  
**August 2019** Best Student Paper Award, IEEE Int. Symp. on Sensing & Instrumentation in IoT Era, Lisbon, Portugal  
**May 2019** DCU President Research Excellence Award, Dublin Ireland  
**December 2018** Best Paper Award, International Conference on Engaging Pedagogy, Dublin, Ireland  
**June 2018** Outstanding Paper Award, EdMedia Conference, Amsterdam, Netherlands  
**June 2016** Best Student Paper Award, IEEE BMSB Conference, Nara Japan  
**October 2015** Best Student Paper Award, ITT Conference, Dublin, Ireland  
**June 2014** Best Student Paper Award, IEEE BMSB Conference, Beijing China  
**May 2014** Best Paper Award, ITT Conference, Dublin, Ireland  
**June 2013** Best Paper Award, IEEE Vehicular Technology Conference, Dresden, Germany  
**May 2013** Best Paper Award, ITT Conference, Athlone, Ireland  
**December 2010** 2010 Best Paper of the Year Award - IEEE Trans. on Broadcasting  
**Oct 2009** Best Paper Award, World Congress on Eng. & Comp. Science, Berkeley, USA  
**July 2008** Best Paper Award, AH Conference Workshop, Hannover, Germany  
**October 2006** Best Paper Award, China-Ireland ICT Conference, Hangzhou, China

October 2006 **Best Student Paper Award**, IEEE/IFIP MMNS Conference, Dublin, Ireland  
 June 2006 **Second Place - Best Paper Competition**, AH Conference, Dublin, Ireland  
 May 2002 **Best Student Poster Paper Award**, W3C WWW Conference, Hawaii, USA  
 June 2001 **Best Paper Award** IEEE International Conf. on Telecommunication Romania

### **COMMERCIALISATION AWARDS (3):**

January 2013 **DCU Invent Centre 2012 ICT Commercialisation Award** (with R. Walshe)  
 December 2011 **DCU Invent Centre 2011 ICT Commercialisation Award** (with Prof O'Connor)  
 December 2010 **DCU Invent Centre 2010 ICT Commercialisation Award** (with Prof O'Connor)

### **TEACHING AND LEARNING AWARDS:**

May 2019 **Nomination for the DCU President Team Teaching and Learning Award**  
 May 2019, 2012, 2004 **Nominations for the DCU President Academic Teaching and Learning Award**  
 Nov 2011, 2009, 2008 **Ericsson Medal for Best Final Year Project**, winning students: David McMullin,  
 Nov 2007, 2005 Keyang Dai, Philip Lowney, Victoria Hatt, Steven O'Callaghan

### **EDITORIAL BOARDS:**

2022 June **Special Issue Editor: IEEE Trans. on Broadcasting, Special Issue on "5G Media Production, Contribution and Distribution"**, [https://bts.ieee.org/images/files/publications/CFP-5G-Media\\_v2.1\\_1.pdf](https://bts.ieee.org/images/files/publications/CFP-5G-Media_v2.1_1.pdf)  
 2020 June **Guest Editor: Hindawi Mobile Information Systems Journal (IF=1.635) special issue on "Edge Intelligence-Boosted Multimedia Internet-of-Things in 5G and Beyond"**, <https://www.hindawi.com/journals/misy/si/857268/>  
 2019 August **Guest Editor: Journal of Information Science and Engineering - special issue on "Advanced Networking & Communications Solutions for Wireless Mobile Networks"** <http://jise.iis.sinica.edu.tw/pages/papers/specialissue.html>  
 2019 January **Guest Editor: Hindawi Wireless Communications & Mobile Computing (IF=1.899), special issue on "Convergence of Heterogeneous Wireless Networks for 5G-and-Beyond Communications: Applications, Architecture & Resource Management"**  
 2018 June-present **Area Editor: Multimedia Comms. - IEEE Comms. Surveys and Tutorials (IF=22.973)**  
 2018 February **Guest Editor: Hindawi Wireless Communications & Mobile Computing (IF=1.899), special issue on "Emerging Small Cell Wireless Technologies for 5G: Architectures and Applications"**  
 2017 March **Guest Editor: Mobile Information Systems Journal (IF=1.635) – special issue on "Challenges and Opportunities of Network Virtualization over Wireless Mobile Networks"** <https://www.hindawi.com/journals/misy/si/251649/>  
 2015 March **Guest Editor: International Journal of Distributed Sensor Networks (IF=0.923), special issue on "Green and Friendly Communication for Sensor Networks"**  
 2012 March—2018 June **Editor: the IEEE Communications Surveys and Tutorials (IF=22.973)**  
 2010 January **Guest Editor for Int. Journal of Digital Multimedia Broadcasting, special issue on "Advances in Circuits and Systems for Wireless Broadband Communications and Broadcasting"**  
 2009 September **Guest Editor-in-chief for the ACM Multimedia Systems Journal, special issue on "Wireless Multimedia Transmission Technology and Application"**  
 2008 June-present **Associate Editor: the IEEE Transactions on Broadcasting (IF=2.381)**  
 2007 September **Guest Editor-in-chief for the IEEE Transactions on Broadcasting special issue on "Quality in Multimedia Broadcasting"**

### **PhD EXAMINATIONS (26):**

2020 October **external PhD examination of Anas Alkasasbeh: "The Impact of Employing Olfactory Media in a Digital Context – a User Performance and Quality of Experience perspective"**, Brunel Univ., London, UK  
 2018 September **external PhD examination of Ángel Martín Navas: "QoE of Media Delivery in 5G Environments"**, Univ. of Basque Country, Bilbao, Spain  
 2018 June **external PhD examination of Cheng Xu: "Enhancement and Performance Analysis for 3D Beamforming Systems"**, Brunel Univ., London, UK  
 2018 May **external PhD examination of Pasquale Scopelliti: "Radio Resource Management Approaches in Multicast Transmission for Supporting Emerging 5G Systems"**, Univ. Mediterranea Reggio Calabria, Italy  
 2018 May **external PhD examination of Roberta Palmeri: "Synthesis of Innovative Electromagnetic Devices via Inverse Scattering Techniques"**, Univ. Mediterranea Reggio Calabria, Italy  
 2018 May **external PhD examination of Fabiola Panto: "Batteries for Green ICT Systems: Environmental Concerns"**, Univ. Mediterranea Reggio Calabria, Italy

2017 June external PhD examination of Gianluigi Pibiri: *“Quality Queue Management for Future Wireless Networks”*, Trinity College Dublin, Ireland

2017 February external PhD examination of Alessandro Floris: *“Quality of Experience: Modelling and Applications Scenarios”*, Univ. of Cagliari, Italy

2016 March external PhD examination of Osama Arouk: *“Cellular-based Machine-to-Machine: Congestion Control and Power Management”*, Univ. Rennes 1, France

2015 February external PhD examination of Chang Ge: *“Towards Energy Efficient Content Delivery Networks”*, Surrey University, UK

2014 October external PhD examination of Jason Quinlan: *“Efficient Delivery of Scalable Media Streaming over Lossy Networks”*, University College Cork, Ireland

2012 May external PhD examiner of Mathias Kretschmer: *“Integration of Unidirectional Technologies into a Carrier-grade Wireless Backhaul Architecture”*, Brunel Univ., London, UK

2011 September external PhD examination of Tanmoy Debnath: *“QoS-aware Multimedia Delivery Algorithm over Wireless LAN”*, Dublin IT, Ireland

2010 November external PhD examination of Gajaruban Kandavanam: *“Guaranteed Video-on-Demand Delivery in IPTV Networks”*, Waterford IT, Ireland

2008 January external PhD examination of Oluwakemi A. Ademoye: *“Olfaction-enhanced Multimedia—A User’s Perspective”*, Brunel Univ., London, UK

2006-2022 internal PhD exams: Luka Murn (2022), Feng Guo (2016), Arsalan Saljoghei (2016), Chen Sun (2014), Milan Redzic (2013), Damien Connaghan (2012), Piotr Szczechowiak (2008), Daniel Larkin (2008), Csaba Csirjek (2008), Ljiljana Adamovic (2006), David Sadlier (2006)

#### MSc EXAMINATIONS:

2015 August external MSc examination of Niall Maher: *“Exploiting the Predictability of Movement to Optimise Handover in Heterogeneous Networks”*, AIT, Ireland

#### EDUCATION AND PUBLIC ENGAGEMENT ACTIVITIES

3 February 2022 *“Connections” - live opera show* organised in collaboration with artists from SAMP Portugal and INO Ireland; participants: 40 members of the public from 7 countries

June 2019 *“Innovative Technology Enhanced STEM Education Opportunities for Children from Dublin Docklands Area” – Workshop*; participants: 130 students from 3 primary schools

May-June 2019 *“Remote Technology Enhanced Learning Earth Course”* - 4 week Course - participants: 60 fifth class primary school boys St Patrick BNS Drumcondra Dublin

January 2018 *“Physics and Chemistry Technology-enhanced Learning Lessons using Virtual Labs”* - participants: 50 year 1 secondary school students - Belvedere College Dublin

Feb-April 2018 *“Innovative Technology Enhanced Learning Earth Course employing Virtual Labs”* - 8 week Course - participants: 60 fifth class primary school girls Corpus Christi GNS Drumcondra Dublin

Feb-April 2018 *“Innovative Technology Enhanced Learning Earth Course employing Virtual Labs”* - 8 week Course - participants: 60 fifth class primary school boys St Patrick BNS Drumcondra Dublin

#### UNIVERSITY ACTIVITIES:

May 2022 Coordinating Reviewer – Faculty of Science Review

2020 – present School of Electronic Engineering Teaching and Learning Convenor

2015 - 2020 Chairperson Common Engineering Undergraduate programmes

2010 - 2015 Chairperson Masters Engineering programmes

2005 - 2010 Chairperson Common Engineering Undergraduate programmes

#### INITIATIVES:

2012 - present research collaboration with IIT Delhi, India

2015 - present founding member of the DCU Entwine research centre

2011 - 2013 founding member of CloudCore – the Cloud Computing Research Centre

2009 - present research collaboration with Beijing University of Posts and Telecom., China

2008 - 2015 founded and led the Network Innovations Centre (NIC), RINCE Institute, Ireland

2007 - 2010 co-Director Odysseus - Online Dublin Computer Science Summer School

## **KEYNOTE/INVITED TALKS/DEMOS:**

|                |  |
|----------------|--|
| 2021 June      | keynote talk: <i>"Delivering High Quality Rich Media Content in Current Network Environment: Challenges and Solutions"</i> , the 28th International Conference on Systems, Signals and Image Processing (IWSSIP), Bratislava, Slovakia |
| 2020 June      | invited talk: <i>"Challenges of Using EU Project Innovative Technologies and Pedagogies in a Post Covid-19 Era"</i> , European Commission Coordinator Workshop on Interactive Technologies, Luxembourg                                 |
| 2019 April     | keynote talk: <i>"Improving Learning Process by Using EU Horizon 2020 NEWTON Project's Innovative Technologies and Pedagogies in STEM Education"</i> , Irish International Conference on Education, Dublin, Ireland                    |
| 2019 April     | keynote talk: <i>"Rich Media Content Delivery in 5G Network Environments"</i> , IEEE BTS Young Professionals Workshop, Brunel Univ. London, UK   |
| 2018 December  | demo: <i>"EU Horizon 2020 NEWTON project Outcomes"</i> , International Conference on Engaging Pedagogy, Dublin, Ireland  |
| 2018 April     | keynote talk: <i>"Multimedia Delivery in Future Network Environments: Challenges and Approaches"</i> , IEEE BTS Young Professionals Workshop, Univ. Reggio Calabria, Italy   |
| 2016 November  | keynote talk: <i>"Multimedia Delivery over Converged Broadband Wireless, Cellular and Broadcast Networks"</i> , IEEE BTS Young Professionals Workshop, Dublin, Ireland   |
| 2014 July      | invited talk: <i>"Innovative Solutions for Quality and Energy-aware Multimedia Delivery in Heterogeneous Network Environments"</i> , Beijing Univ. of Posts and Telecomm. Beijing, China   |
| 2014 July      | invited talk: <i>"Energy Efficiency-oriented Rich Media Content Delivery"</i> , Jiaotong Univ. Beijing, China  |
| 2014 May       | keynote talk: <i>"Balancing Quality and Energy Awareness for Multimedia Content Delivery in Heterogeneous Wireless Network Environments"</i> , IEEE BTS GOLD Workshop, Transylvania Univ. Brasov, Romania                              |
| 2013 April     | invited talk: <i>"Quality of Service and Quality of Experience for Multimedia Network Deliveries"</i> , Univ. Basque Country, Bilbao, Spain  |
| 2012 March     | invited talk: <i>"Convergence of Broadband, Broadcast and Cellular Communications"</i> , IEEE BTS GOLD Workshop, Univ. Gent, Belgium   |
| 2010 November  | invited talk: <i>"Quality-oriented and Energy-aware Multimedia Delivery in Heterogeneous Network Environments"</i> , Waterford IT, Ireland   |
| 2009 June      | invited talk: <i>"Adaptive Solutions for Quality-oriented Multimedia Delivery"</i> , Brunel University, UK   |
| 2007 October   | invited talk: <i>"Prioritised Adaptive Multimedia Streaming in Wireless Networks"</i> , Enterprise Ireland Informatics Showcase, Dublin, Ireland   |
| 2007 September | invited talk: <i>"Adaptive Solutions for Quality-oriented Multimedia Streaming"</i> , IEEE Broadcasting Society, Irish Chapter, Dublin, Ireland  |
| 2007 June      | invited talk: <i>"Adaptive Multimedia-based e-Learning"</i> , Warwick Univ. UK   |

## **OTHER ACTIVITIES:**

|                    |   |
|--------------------|---|
| 2022 March         | member – IEEE P1954 Standardisation Workgroup on <i>"Self-Organizing Spectrum-Agile Unmanned Aerial Vehicles Communications"</i>                          |
| 2020 Sep           | attendance – DCU GDPR Ethics Training Workshop  |
| 2019 Oct-2020 Mar  | member and assessor - Quality Improvement & Development (QuID) Initiative: <i>"Building the DCU Community and Encouraging Cross-Campus Collaboration"</i> |
| 2020 Jan – present | LERO@DCU Director   |
| 2019 May - present | member of LERO Executive Leadership Committee   |
| 2019 - present     | member of DCU Quality Promotion Committee   |
| 2018 - present     | member of Insight – the Irish Centre for Data Analytics   |
| 2017 October       | organizer: <i>"Gamification and Multi/Multimedia Integration Workshop"</i> , Dublin   |
| 2017 October       | panel member: <i>"Immersive &amp; Multisensory Experiences"</i> - International Conference on Virtual Systems and Multimedia, Dublin, Ireland             |
| 2016 November      | organizer: IEEE BTS Young Professionals Workshop, <i>"Bridging the Gap between Broadcast Cellular and Broadband Wireless"</i> , Dublin, Ireland           |
| 2012 – present     | member of DCU Academic Council  |
| 2012 – present     | member of ACM   |
| 2011 – present     | member of LERO – the Irish Software Engineering Research Centre   |
| 2007 October       | organising committee member for the IT&T Conference, Dublin Ireland   |

2007 August **panel chair: “Academic-Industry Collaboration”,** IET China-Ireland International Conf. on Information & Communications Technology, Dublin Ireland

2006-2010 **IEEE Dublin City University Student Convenor**

2006 March-November Campus Company Development, Nova University College Dublin, Ireland

2002 - present **member** of IEEE, IEEE Comms. and IEEE Broadcast Tech. Societies

**EXPERT REVIEWER:**

2017, 2019 **reviewer** for the Research Foundation of Flanders - Belgium (funding agency)

2012, 2014, 2016 **reviewer** for the Research Council of Norway (funding agency)

2011 **reviewer** for the Natural Sciences and Engineering Research Council of Canada

2011 **external evaluator** 5 programmes (Irish Spring Board)-National College of Ireland

2006 - present **reviewer** Engineering & Physical Science Research Council, UK funding agency

2003 - present **reviewer** for: IEEE Trans. on Broadcasting, IEEE Trans. Circuits & Systems for Video Technology, IEEE Trans. Vehicular Technology, IEEE Trans. Multimedia, IEEE Comms. Letters, Journal of Digital Information & diverse conferences

**TECHNICAL PROGRAM COMMITTEE SERVICE:**

**TPC/General Chairperson:**

June 2022 IEEE Int. Symp on Broadband Multimedia Syst. & Broadcasting, Bilbao-Spain (**Co-Chair**)

Oct 2020 **“Second International Symposium on High Performance Mobile Computing & Wireless Networks for HPC”** at the International Conference on High Performance Computing & Simulation, Barcelona, Spain (**Co-Chair**)

July 2019 **“First International Symposium on High Performance Mobile Computing & Wireless Networks for HPC”** at the International Conference on High Performance Computing & Simulation, Dublin, Ireland (**Co-Chair**)

May 2018 Workshop **“NEWTON Pilots, Dissemination and Exploitation”**, Salerno, Italy (**Chair**)

October 2017 Workshop **“Gamification & Multi/Multimedia Integration”**, Dublin, Ireland (**Chair**)

Nov 2016 IEEE BTS Young Professionals Workshop, **“Bridging the Gap between Broadcast, Cellular and Broadband Wireless”**, Dublin, Ireland (**General Chair**)

Oct 2016 IEEE International Conference on Wireless Communications and Signal Processing, Wireless Network Symposium (WCSP) Yangzhou China (**TPC co-Chair**)

Nov 2015 IEEE Comm. Technologies for Disaster Management Conf., Rennes France (**TPC Chair**)

May 2014 IT&T Conference, Dublin City University, Dublin Ireland (**General Chair**)

June 2013 IEEE Int. Symp on Broadband Multimedia Syst. & Broadcasting, London-UK (**TPC Chair**)

Dec 2010 IEEE GLOBECOM, USA, Multimedia Comms & Services Workshop (**TPC Chair**)

June 2010 ACM International Wireless Communications and Mobile Computing Conf., Multimedia over Wireless Symposium, France (**TPC Chair**)

July 2008 Adaptive Hypermedia & Adaptive Web-based Systems Conf., Hannover, Germany (**Workshop chair**)

October 2007 IT&T Conference, Blandhardstown, Dublin Ireland (**TPC Chair**)

August 2007 IET China-Ireland Int. Conf. on ICT, Dublin Ireland (**Workshop chair**)

**TPC Member (selected conferences):**

2008-2022 IEEE International Conference on Communications (ICC)

2009-2022 IEEE Global Communications Conference (Globecom)

2008-2022 IEEE Int. Symp. on Broadband Multimedia Systems & Broadcasting (BMSB)

2021-2022 ACM Multimedia Systems Conference (MMSys)

2007-2014 IEEE Local Computer Networks Conference (LCN)

2014-2015 IEEE INFOCOM

2010-2011 IEEE International Conference on Network and Service Management (CNSM)

2008-2011 International Wireless Comms & Mobile Computing Conference (IWCMC)

2005-2015 IT&T Conference (ITT)

2006-2009 IEEE/IFIP Int. Conf. Management of Multimedia and Mobile Networks & Services

2006-2013 IET China-Ireland Int. Conf. on Information and Communications Technology

## SELECTED RESEARCH GRANTS:

### As Principal Investigator: over €5 Millions

| No | Project  | Source                                   | Duration              | Amount                 |
|----|--|--|-----------------------|------------------------|
| 1  | Blockchain Network Slicing-based Framework for Vehicular Communications ( <b>BVNSF</b> )   | SFI Centres (13/RC/2094_P2)              | Oct. 2021 – Sep. 2025 | €96,000                |
| 2  | <b>TRACTION</b> - Opera co-creation for a social transformation  | EU Horizon 2020 (EC GA #870610)          | Jan. 2020 – Dec. 2022 | €3.8M (€487K to PI)    |
| 3  | A Blockchain-enabled Trusted 5G Network Slicing ( <b>BTNS</b> ) Framework  | SFI Enable+Huawei (16/SP/3804)           | Aug. 2019 – Aug. 2020 | €224,696 (€165K to PI) |
| 4  | Networked Labs for Training in Sciences and Technologies for Information and Communication ( <b>NEWTON</b> )                           | EU Horizon 2020 (EC GA #688503)          | Mar. 2016 - Feb 2019  | €5.6M (€1.27M to PI)   |
| 5  | Large Scale Internet of Things-enabled Multimedia Delivery for Smart Businesses ( <b>IOT-MIS</b> )                                     | IRC EPS + <b>Wowfli</b> (EPSPG/2015/178) | Feb. 2016 – Jan. 2020 | €96,000                |
| 6  | Balancing Quality and Energy Efficiency for Mobile Rich Media Service Delivery in Future Wireless Heterogeneous Networks ( <b>4M</b> ) | IRC EPS + <b>Wowfli</b> (EPSPG/2015/111) | Feb. 2016 – Jan. 2020 | €96,000                |
| 7  | Innovative Performance Management system for Heterogeneous Network Environments ( <b>E-Stream</b> )                                    | EI IP + <b>Ericsson</b> (IP/2011/0135)   | Apr. 2012- Mar. 2014  | €590,849               |
| 8  | Quality Optimization of Video Based Surveillance in a Network Constraint Environment ( <b>V-Quality</b> )                              | IRCSET EPS + <b>Everseen</b>             | Apr. 2012-Sep. 2015   | €85,500                |
| 9  | Energy-optimal Adaptive Scheme for Wireless Devices ( <b>EASE</b> )  | EI (CF/2011/1037)                        | Jan. 2012-Mar. 2013   | €95,512                |
| 10 | Energy-aware High Quality Multimedia Delivery in a Wireless Mesh Network Environment ( <b>E-Mesh</b> )                                 | IRCSET EPS + <b>Everseen</b>             | July 2011-June 2014   | €85,500                |
| 11 | Communications Performance Modeling for <b>Exascale</b> Comp.  | IRCSET EPS+ <b>IBM</b>                   | Dec 2011-Dec 2013     | €91,790                |
| 12 | Innovative Content Delivery Solutions in the Future Network Heterogeneous Environment ( <b>LTE Priority</b> )                          | China Scholar. Council                   | Oct. 2011-Sep. 2015   | €57,600                |
| 13 | Content-Aware Network-Effective CCTV for the Retail Sector ( <b>CANE</b> )   | EI IP + <b>Everseen</b> (IP/2010/0072)   | Jan 2011-Mar. 2012    | €125,000               |
| 14 | A Cross-layer Power Saving Solution for Multimedia Data Transm. in Heterogeneous Wireless Environments ( <b>Q-PASTE</b> )              | IRCSET (RS/2010/2095)                    | Oct. 2010 – Sep. 2013 | €85,500                |
| 15 | Providing Energy-aware Rich Network-based Services in Strict Security Environments ( <b>AWERA</b> )                                    | IRCSET EPS + <b>Citadel 100</b>          | Oct. 2010 – Sep. 2013 | €85,500                |
| 16 | Energy-aware Encoding and Streaming for Rich Media Content-enabled Mobile Devices ( <b>EMD</b> )                                       | IRCSET Postdoc + <b>Everseen Ltd</b>     | Dec. 2010 – Dec. 2012 | €80,000                |
| 17 | User-Centric Access Network Selection Strategy ( <b>UCANS</b> )  | EI-POC (PC/2008/152)                     | Jan. 2009 -Mar. 2010  | €98,000                |
| 18 | Differentiated Quality Wireless Multimedia Streaming ( <b>IPAS</b> )   | China Scholar. Council + DCU             | Oct. 2008 -Sep. 2012  | €97,600                |
| 19 | Quality-Oriented Adaptive <b>Cluster</b> -Based Spectrum Reuse for Multimedia Streaming in Adhoc & Cellular Wireless Networks          | IRCSET Postdoc                           | Dec. 2008 -Dec. 2010  | €84,000                |
| 20 | <b>Odysseus</b> -Technologies for Aiding Human Memory  | SFI UREKA (07/UR/11099)                  | June 2007 -May 2011   | €310,595               |
| 21 | Quality-Oriented Handover Scheme for Adaptive Multimedia Streaming in Heterogeneous Wireless Network Env. ( <b>SASHA</b> )             | IRCSET EPS + <b>Microsoft</b>            | Oct. 2007 -Sept. 2010 | €72,000                |
| 22 | Best Route Selection-based on Existing Road Traffic Conditions via Mobile Ad-hoc Wireless Networks ( <b>TRAFCON</b> )                  | IRCSET (RS/2006/1435)                    | Oct. 2006 -Sept. 2009 | €72,000                |
| 23 | Prioritised In-Home Adaptive Multimedia-based Service Delivery Scheme ( <b>PIHAS</b> )   | EI-POC (PC/2005/001)                     | Aug. 2005-July 2006   | €85,000                |
| 24 | Prioritised Adaptive Multimedia Streaming Scheme ( <b>PAM</b> )  | IRCSET (RS/2005/20)                      | Oct. 2005-Sep. 2008   | €68,913                |
| 25 | Cost-effective Quality-oriented Delivery of Multimedia Content over Heterogeneous Wireless Networks ( <b>CEQoD</b> )                   | IRCSET (RS/2005/01)                      | Oct. 2005-Sep. 2008   | €68,913                |

### As Collaborator: Over. €1,500,000

| No | Project  | Source                                    | Duration           | Amount                          |
|----|--|---|--------------------|---------------------------------|
| 1  | The Insight Centre for Data Analytics, phase 2 (PI: Prof. N O'Connor – DCU) – Collaborators: NUI Galway, University College Cork, University College Dublin          | SFI Centers (12/RC/2289_P2)               | Jan. 2020-Dec 2025 | €9.1M to DCU (total: €49.1M)    |
| 2  | Basic Theories and Core Technologies for 6G Networks (PI: Prof. C. Xu – BUPT China) – Collaborators: Stanford Univ., Univ. Surrey, Univ. Waterloo, Southampton Univ. | Ministry of Science and Technology, China | Jan. 2019-Dec 2022 | Total: €13,000,000 (€1,700,000) |
| 3  | Smart Communities ( <b>ENABLE</b> ) (PI: Prof. S. Clarke) – Collaborators: University College Dublin and Trinity College Dublin                                      | SFI-Spoke (16/SP/3804)                    | Mar. 2018-Feb 2022 | €400,000 (total €14,500,000)    |



|    |   |                                   |                     |                              |
|----|---|-----------------------------------|---------------------|------------------------------|
| 4  | Lero–The Irish Software Engineering Research Centre – Second Term ( <b>Lero II</b> )  | SFI–CSET (10/CE/I1855)            | May 2011-Apr. 2016  | €590,475 (total €12,459,454) |
| 5  | Multimedia Content Distribution over Wireless Cognitive Networks ( <b>MCOG</b> ) - No. 61001122 (PI: Prof. C. Xu)                 | National Science Foundation China | Jan 2011-Dec 2013   | €26,000                      |
| 6  | Cognitive Multimedia Transmission Control Protocol over Future Mobile Internet ( <b>CMTCP</b> ) - No. BK2011171 (PI: Prof. C. Xu) | JiangSu NSF China                 | Jul 2011-Jul 2014   | €14,000                      |
| 7  | <b>Communicator 2</b> A New Handheld Device (PI: Prof. O'Connor)  | <b>Disney Research</b>            | Oct 2011-Sep 2012   | €56,709                      |
| 8  | Interactive Multimedia Streaming Services over Mobile Peer-to-Peer Network ( <b>MP2P</b> ) - No. 4102064 (PI: Prof. C. Xu)        | Beijing NSF China                 | Jan 2010-Dec 2012   | €13,000                      |
| 9  | <b>Communicator</b> : An ultra-thin Wi-Fi platform for Enhanced User Experience in Stadiums & Theme Parks (PI: Prof. N O'Connor)  | El IP + <b>Disney Research</b>    | Oct 2009- Mar 2011  | €156,496                     |
| 10 | Performance-Aware Multimedia-based Adaptive Hypermedia ( <b>PAMAH</b> ) (PI: Dr. J. McManis)                                      | SFI RF 07/RFP/CMSF696             | June 2007-Sep 2010  | €50,000 (total €145,000)     |
| 11 | Smart Personal Information Network ( <b>SPIN</b> ) (PI: Prof. Noel O'Connor)  | <b>Samsung Korea</b>              | Oct. 2006-Sept 2009 | €200,000 (total €400,000)    |

### **SELECTED TEACHING AND LEARNING GRANTS:**

#### **As Collaborator: over €600,000**

|   |  |             |                    |                              |
|---|--|-------------|--------------------|------------------------------|
| 1 | SFI Centre for Research Training in Machine Learning (ML-Labs) (PI: Prof. N. O'Connor)         | 18/CRT/6183 | Mar 2019- Oct 2026 | €400,000 (total €12,106,822) |
| 2 | SFI Centre for Research Training in Digitally-Enhanced Reality (D-REAL) (PI: Prof. A. Smeaton) | 18/CRT/6224 | Mar 2019- Oct 2026 | €150,000 (total €13,273,402) |
| 3 | Telecommunications Graduate Initiative ( <b>TGI</b> ) (PI: Dr. C. Brennan)                     | HEA PRTL 5  | June 2011-May 2015 | €65,000 (total €736,000)     |

### **RECENT FUNDING APPLICATIONS**

|    |  |                                  |                            |          |
|----|--|----------------------------------|----------------------------|----------|
| 1  | Framework for Performance-aware Differentiated Innovative Services in 5G and Beyond Networks (FRADIS) – Jan 2022                                     | Frontiers for the Future 2022    | Science Foundation Ireland | €479,669 |
| 2  | Enhancing Scientific and Technologic Capacities of Rich Media Delivery to Remote Audiences (EST-RIMEDIA)   | HORIZON-WIDERA-2021-ACCESS-03-01 | EU Horizon Europe          | €170,038 |
| 3  | Explainable ML Virtual reality-Real world TWINning solutions for multi-objective optimisation in training and upskilling (VIRTWIN) – Sep. 2021       | HORIZON-CL4-2021-HUMAN-01-01     | EU Horizon Europe          | €948,636 |
| 4  | Green Edge IoT Systems Education and Research (GEISER) – November 2021   | HORIZON-MSCA-2021-DN-01          | EU Horizon Europe          | €486,576 |
| 5  | Framework for Performance, Energy and Quality Support for Differentiated Innovative Services in a Heterogeneous Network Environment - September 2020 | Frontiers for the Future 2020    | Science Foundation Ireland | €479,711 |
| 6  | Flying Edge Computing (Fly-Edge) - June 2020   | FETOPEN-01-2018-2019-2020        | EU Horizon 2020            | €851,000 |
| 7  | Mobile Edge Computing -based Blockchain for Vehicular Networks (MECOB-4-VNET) – August 2020  | MSCA-IF-2020                     | EU Horizon 2020            | €197,000 |
| 8  | Innovative Differentiated Rich Media Services in Future Heterogeneous Network Environments - March 2019  | Frontiers for the Future 2019    | Science Foundation Ireland | €479,224 |
| 9  | Flying Edge Computing (Fly-Edge) - September 2019  | FETOPEN-01-2018-2019-2020        | EU Horizon 2020            | €851,000 |
| 10 | SUSTAINable IoT through Context-aware Edge Processing and System Design Strategies (SUSTAIN-IT) – August 2019  | MSCA-IF-2019                     | EU Horizon 2020            | €197,000 |

### **PHD GRADUATES (25)**

#### **As Principal or Sole Supervisor (19):**

- **Abid Yaqoob** (<https://www.insight-centre.org/our-team/abid-yaqoob/>) - examiner Prof. L. Atzori (Univ. of Cagliari, Italy), Successful VIVA: Apr 2022, Institution: Dublin City University  
Thesis: **Enabling Bandwidth-Efficient and Quality-Oriented Adaptive Streaming for Omnidirectional Videos**
- **Timothy Casey** ([https://www.researchgate.net/profile/T\\_Casey](https://www.researchgate.net/profile/T_Casey)) - examiner Dr. J. Montalban (Univ. of Basque Country, Spain), Successful VIVA: Aug 2020, Institution: Dublin City University  
Thesis: **Optimising End-user QoE for DASH Enabled Video Streams over Bandwidth Constrained Links in Urban HetNets**
- **Anderson Simiscuka** (<http://www.eeng.dcu.ie/~anderson/>) - examiner: Prof. D. Gomez-Barquero (Polytechnic Univ. Valencia, Spain), Successful VIVA: Nov 2019, Institution: Dublin City University  
Thesis: **Mobility-enabled Networking Scheme for Rich Media Internet of Things Platforms**
- **John Monks** (<http://linkedin.com/in/johnmonks1>) - examiner: Prof. V. Popescu (Univ. Transylvania Brasov Romania) Successful VIVA: Nov 2019, Institution: Dublin City University  
Thesis: **Balancing Quality and Energy Efficiency for Mobile Rich Media Service Delivery in a Future Wireless Heterogeneous Network Environment**

- **Martin Kennedy** (<http://www.eeng.dcu.ie/~kennedym>) - examiner: Prof. G. Rozinaj (Tech Univ. Bratislava Slovakia)  
Successful VIVA: April 2017, Institution: Dublin City University  
Thesis: **Energy-aware Adaptive Solutions for Multimedia Delivery to Wireless Devices**
- **Ting Bi** (<http://www.eeng.dcu.ie/~tingbi>) - examiner: Prof. P. Angueira (Basque Country Univ. Spain)  
Successful VIVA: February 2017, Institution: Dublin City University  
Thesis: **Network Reputation-based Quality Optimization of Video Delivery in Heterogeneous Wireless Environments**
- **Longhao Zou** (<http://www.eeng.dcu.ie/~longhao/>) - examiner: Prof. M. Murrone (University of Cagliari, Italy)  
Graduation: November 2016, Institution: Dublin City University  
Thesis: **Innovative Content Delivery Solutions in the Future Network Heterogeneous Environment**
- **Irina Tal** (<http://www.eeng.dcu.ie/~irina>) - examiner: Prof. P. Lazaridis (Huddersfield Univ., UK)  
Graduation: April 2016, Institution: Dublin City University  
Thesis: **Improving User Experience and Energy Efficiency for Different Classes of Users in Vehicular Networks**
- **Lejla Rovcanin** (<http://elm.eeng.dcu.ie/~lejla>) - examiner: Dr. G. Ghinea (Brunel Univ., UK)  
Graduation: April 2016, Institution: Dublin City University  
Thesis: **DASH-based Network Performance-aware Solutions for Personalised Video Delivery Systems**
- **Quang Le-Dang** - examiner: Prof. D. Guerra (Basque Country Univ., Bilbao, Spain)  
Graduation: November 2015, Institution: Dublin City University  
Thesis: **Location-Aware Mechanism for Efficient Video Delivery over Wireless Mesh Networks**
- **Ronan Doolan** (<http://www.eeng.dcu.ie/~doolanr>) - examiner: Prof. D. Popescu (Old Dominion Univ., USA)  
Graduation: November 2015, Institution: Dublin City University  
Thesis: **VANET-enabled Eco-friendly Road Characteristics-aware Routing for Vehicular Traffic**
- **Shengyang Chen** - examiner: Prof. A. Ksentini (Univ. of Rennes, France)  
Graduation: March 2015, Institution: Dublin City University  
Thesis: **Cross-layer Energy-efficient Schemes for Multimedia Content Delivery in Heterogeneous Wireless Networks**
- **Yang Song** (<http://www.eeng.dcu.ie/~yang>) - examiner: Prof. A. Arrinda (Basque Country Univ. Spain)  
Graduation: March 2014, Institution: Dublin City University  
Thesis: **A Cross-layer Quality-oriented Energy-efficient Scheme for Multimedia Delivery in Wireless Local Area Networks**
- **Ruiqi Ding** (<http://www.eeng.dcu.ie/~ruiqi>) – examiner: Prof. Z. Sun (Univ. of Surrey, UK)  
Graduation: March 2014, Institution: Dublin City University  
Thesis: **Device Characteristics-based Differentiated Energy-efficient Adaptive Solution for Multimedia Delivery over Heterogeneous Wireless Networks**
- **Zhenhui Yuan** (<http://www.eeng.dcu.ie/~yuanzh>) – examiner: Prof. W. Joseph (Ghent Univ., Belgium)  
Graduation: November 2012, Institution: Dublin City University  
Thesis: **Quality of Service Differentiation for Multimedia Delivery in Wireless LANs**
- **Ramona Trestian** (<http://www.eeng.dcu.ie/~ramona>) – examiner: Prof. J. Cosmas (Brunel Univ., UK)  
Graduation: March 2012, Institution: Dublin City University  
Thesis: **User-Centric Power-Friendly Quality-based Network Selection Strategy for Heterogeneous Wireless Environments**
- **Bogdan Ciubotaru** (<http://www.eeng.dcu.ie/~bogdan>) – examiner: Prof. A. Touhafi (Vrije Univ., Belgium)  
Graduation: March 2011, Institution: Dublin City University  
Thesis: **Quality-Oriented Handover for Multimedia Content Delivery in Heterogeneous Wireless Environments**
- **Kevin Collins** (<http://www.eeng.dcu.ie/~collinsk>) – examiner: Prof. L. Iftode (Rutgers Univ., USA)  
Graduation: March 2011, Institution: Dublin City University  
Thesis: **Infrastructure-based Vehicular Wireless Communications Solution for Road Traffic Efficiency**
- **Seung-Bum Lee** (<http://www.eeng.dcu.ie/~sblee>)-examiner: Prof. P. Angueira (Basque Country Univ Spain)  
Graduation: March 2010, Institution: Dublin City University, Co-supervisor: Prof. Alan Smeaton  
Thesis: **Smart PIN-A Novel Performance and Cost-oriented Context-aware Personal Information Network**

#### As Second Supervisor (6):

- **Bao Nguyen Trinh** (<https://www.linkedin.com/in/bao-trinh-nguyen-071445a4/>)  
Examination: June 2020, Institution: University College Dublin, First supervisor: Prof. Liam Murphy  
Thesis: **Balancing Quality of Service & Energy Efficiency for Video Delivery in Wireless Multimedia Sensor Networks**
- **Yi Han** (<https://sites.google.com/site/alberthanyij/>)  
Graduation: November 2015, Institution: University College Dublin, First supervisor: Prof. Liam Murphy  
Thesis: **Performance-aware Adaptive Multimedia Delivery**
- **Niall Murray** (<http://www.niallmurray.info/>)  
Graduation: Nov. 2014, Institution: Athlone Institute of Tech., Co-supervisors: Dr. Brian Lee, Dr. Y. Qiao  
Thesis: **QoE derived Olfaction-enhanced Multimedia Synchronization**
- **Adriana Hava** (<https://www.linkedin.com/pub/adriana-hava/16/226/395>)  
Graduation: November 2014, Institution: University College Dublin, First supervisor: Prof. John Murphy  
Thesis: **Quality of Service Support for Multimedia Applications in Wireless Mesh Networks**



- **Changqiao Xu** (<http://sites.google.com/site/cqiaoxu>)  
Graduation: Jan. 2009, Institution: Academy of Sciences Beijing China, First supervisor: Prof. Zhimei Wu  
Thesis: *A Hybrid Overlay Solution for Efficient Peer-to-Peer Video on Demand Services*
- **Olga Ormond** (<http://www.eeng.dcu.ie/~ormondo>)  
Graduation: November 2007, Institution: University College Dublin, First supervisor: Prof. John Murphy  
Thesis: *User-Centric Network Selection Strategy in Heterogeneous Wireless Networks*

### **MEng by RESEARCH GRADUATES (5)**

#### **As Principal or Sole Supervisor:**

- **Vasile Horia Muntean** (<http://www.eeng.dcu.ie/~horia>)  
Graduation: November 2010, Institution: Dublin City University, Ireland  
Thesis: *Adaptive Multimedia Streaming Control Algorithm in Wireless LANs and 4G Networks*
- **Edward Casey** (<http://www.eeng.dcu.ie/~caseye>)  
Graduation: November 2007, Institution: Dublin City University, Ireland  
Thesis: *User Greediness Control Algorithm for Multimedia Streaming in Wireless Local Area Networks*
- **Janet Adams** (<http://www.eeng.dcu.ie/~adamsj>)  
Graduation: November 2007, Institution: Dublin City University, Ireland  
Thesis: *Adaptive Buffer Power Save Mechanism for Mobile Multimedia Streaming*

#### **As Second Supervisor:**

- **Changqiao Xu** (<http://sites.google.com/site/cqiaoxu>)  
Graduation: May 2009, Institution: Athlone Institute of Technology, First supervisor: Enda Fallon  
Thesis: *Seamless Distribution of Multimedia Content over Wireless Multihoming Technologies*
- **Timothy Casey**  
Graduation: November 2008, Institution: Institute of Technology Carlow, First supervisor: Dave Denieffe  
Thesis: *Dynamic Energy-aware Network Selection in Heterogeneous Multi-network Wireless Environments*

### **ALUMNI:**

#### **Postdoc fellows/Postdoc researchers (18):**

Dr. Rohit Verma (2021-2022), Dr. Bao Trinh (2020-2022), Dr Ting Bi (2017-2020), Dr Diana Bogusevschi (2017-2019), Dr. Dan Zhao (2017-2019), Dr Shengyang Chen (2018-2019), Dr Muhammed Maddi (2019), Dr. Nima Gorji (2018), Dr. Nasim Ferdosian (2017-2018), Dr. Longhao Zou (2016-2017), Dr. Irina Tal (2015-2017), Dr. Sebastian Robitzsch (2013-2015) Dr. Faisal Zaman (2012-2014), Dr. Zhenhui Yuan (2012-2014), Dr. Hrishikesh Venkataraman (2008-2013), Dr. Ramona Trestian (2012-2013), Dr. Ioana Ghergulescu (2012-2013), Dr. Bogdan Ciubotaru (2011-2013)

#### **Research officers (2):**

Dr. Olga Ormond (2012-2013), Gabriel Hogan (2013)

**Other (80+):** Research assistants/software developers (10), Interns (50+), Exchange PhD/students (20+): France, India, China, Italy, Spain, Romania.

### **PUBLICATIONS - SUMMARY:**

| Publication Summary  |                     |
|--|---------------------|
| <b>Books (authored)</b>                                      | <b>4</b>            |
| <b>Books (edited/proceedings)</b>                            | <b>6/3</b>          |
| Journal Editorial Board Member/ <b>Edited Special Issues</b> | <b>2/5</b>          |
| <b>Technical Programme Chair/Member</b>                      | <b>7/45</b>         |
| Book Chapters/ <b>Patents</b>                                | <b>26/3</b>         |
| <b>Peer Reviewed Journal /Conference Papers</b>              | <b>159/276</b>      |
| <b>h-index/i10-index/Total Number of Citations</b>           | <b>52/179/8500+</b> |

### **PUBLICATIONS:**

**Note 1:** I have papers published in 6 of the top 10 journal papers based on Article Influence Score in the Telecommunications area as indicated by the IEEE: [http://www.ieee.org/publications\\_standards/publications/journalmag/journalcitations.html](http://www.ieee.org/publications_standards/publications/journalmag/journalcitations.html)

**Note 2:** The impact factors and rankings indicated below are as they were recorded when the papers were published.

**Note 3:** My Google Scholar publications profile is public at: <http://scholar.google.com/citations?hl=en&user=ryAGqJIAAAAJ>

#### **Authored Books (4)**

4) C. H. Muntean, D. Bogusevschi, Gabriel-Miro Muntean, *"Innovative Technology-based Solutions for Primary, Secondary and Tertiary STEM Education"*, Paragon Publishing, UK, Sep 2019 – ISBN 978-1-7822-2714-4 (344 pages)

- 3) B. Ciubotaru, **Gabriel-Miro Muntean**, *“Advanced Network Programming Principles and Techniques”*, Springer, UK, 2013 – ISBN 978-1-4471-5291-0 (268 pages)
- 2) V. H. Muntean, M. Otesteanu, **Gabriel-Miro Muntean**, *“QoS-oriented Multimedia Delivery over 4G Wireless Networks: Dynamic Quality-Oriented Adaptation Scheme a user-oriented adaptation mechanism”*, LAP Lambert Academic Publishing, 2011, ISBN 978-3-8465-4591-1 (132 pages)
- 1) **Gabriel-Miro Muntean**, C. H. Muntean, *“Adaptive Solutions for Information Delivery over IP Networks”*, Politehnica University Publishing House, Timisoara, Romania 2005, ISBN 973-625-290-6 (221 pages)

#### **Edited Books (6)**

- 6) G. Cornetta, A. Touhafi and **Gabriel-Miro Muntean**, *“Social, Legal, and Ethical Implications of IoT, Cloud, and Edge Computing Technologies”*, IGI Global, USA, June 2020, ISBN: 978-1799838173 (300 pages)
- 5) R. Trestian, **Gabriel-Miro Muntean**, *“Paving the Way for 5G through the Convergence of Wireless Systems”*, IGI Global, USA, December 2018, ISBN: 978-1522575702 (350 pages)
- 4) R. Trestian, **Gabriel-Miro Muntean**, *“Convergence of Broadband, Broadcast, and Cellular Network Technologies”*, IGI Global, USA, April 2014, ISBN: 978-1466659780 (333 pages)
- 3) H. Venkataraman, **Gabriel-Miro Muntean**, *“Energy Scavenging and Optimization Techniques for Wireless Devices”*, CRC Press, Taylor and Francis Group, USA, March 2012, ISBN: 978-1439859896 (401 pages)
- 2) H. Venkataraman, **Gabriel-Miro Muntean**, *“Cognitive Radio and its Technological Impact on Wireless Cellular and Vehicular Networks”*, Springer, Netherlands, May 2012, ISBN: 978-9400718272 (404 pages)
- 1) **Gabriel-Miro Muntean**, R. Trestian, *“Wireless Multi-Access Environments and Quality of Service Provisioning: Solutions and Application”*, IGI Global, USA, January 2012, ISBN: 978-1466600171 (429 pages)

#### **Edited Proceedings (3)**

- 3) M. Hofmann, **Gabriel-Miro Muntean**, *“Towards the internet of Things: Issues, Challenges and Approaches”*, Proc. Information and Telecommunication Technologies Conf., SNAP Publishing, Ireland, May 2014, ISSN 1649-1246 (161 pages)
- 2) **Gabriel-Miro Muntean**, M. Hofmann, B. Nolan, *“Digital Convergence in a Knowledge Society”*, Proc. Information and Telecommunication Technologies Conference, SNAP Publishing, Ireland, Oct. 2007, ISSN 1649-1246 (205 pages)
- 1) **Gabriel-Miro Muntean**, C. Brennan, R. Sadleir, *“Innovative Information and Communications Technologies for a Global Knowledge-driven Society”*, Proc. IET China-Ireland International Conference on Information and Communications Technologies, Institution of Engineering and Technology (IET), UK, August 2007, 2 vol, ISBN 978-0863418273 (1072 pages)

#### **Selected Recent Top Journal Papers (Total = 159)**

##### **2022**

- 147) Han Xiao, Changqiao Xu, Zichen Feng, Renjie Ding, Shujie Yang, Lujie Zhong, Jie Liang and **Gabriel-Miro Muntean** *“A Transcoding-enabled 360° VR Video Caching and Delivery Framework for Edge-enhanced Next-generation Wireless Networks”*, IEEE Journal on Selected Area in Communications (JSAC), vol. 40, no. 5, May 2022, pp. pp. 1615-1631- Impact Factor: 9.144
- 145) Abid Yaqoob, Mohammed Amine Togou and **Gabriel-Miro Muntean**, *“Dynamic Viewport Selection-based Prioritized Bitrate Adaptation for Tile-based 360° Video Streaming”*, IEEE Access, vol. 10, 2022, pp. 29377 - 29392 - Impact: 3.367
- 144) Dan Zhao, Jim Playfoot, Carmine de Nicola, Giuseppe Guarino, Marilena Bratu, Fabio Di Salvatore and **Gabriel-Miro Muntean** *“An Innovative Multi-layer Gamification Framework for Improved STEM Learning Experience”*, IEEE Access, vol. 10, January 2022, pp. 3879-3889 - Impact Factor: 3.367

##### **2021**

- 143) Aoyang Zhang, Qing Li, Ying Chen, Xiaoteng Ma, Longhao Zou, Yong Jiang, Zhimin Xu and **Gabriel-Miro Muntean**, *“Video Super-Resolution and Caching - An Edge-Assisted Adaptive Video Streaming Solution”*, IEEE Transactions on Broadcasting, vol. 67, no. 4, December 2021, pp. 799-812 - Impact Factor: 3.863
- 142) Hao Hao, Changqiao Xu, Shujie Yang, Lujie Zhong, **Gabriel-Miro Muntean**, *“Multicast-Aware Optimization for Resource Allocation with Edge Computing and Caching”*, Journal of Network and Computer Applications, Elsevier, vol. 193, Article 103195, November 2021 - Impact Factor: 6.281
- 141) Wanxin Shi, Chao Wang, Yong Jiang, Qing Li, Gengbiao Shen and **Gabriel-Miro Muntean**, *“CoLEAP: Cooperative Learning-Based Edge Scheme with Caching and Prefetching for DASH Video Delivery”*, IEEE Transactions on Multimedia, vol. 23, October 2021, pp. 3631-3645 - Impact Factor: 6.513
- 140) Ting Bi, Roisin Lyons, Grace Fox and **Gabriel-Miro Muntean**, *“Improving Student Learning Satisfaction by Using an Innovative DASH-based Multiple Sensorial Media Delivery Solution”*, IEEE Transactions on Multimedia, vol. 23, September 2021, pp. 3494-3505 - Impact Factor: 6.513
- 139) John Sexton, Anderson Augusto Simiscuka, Kevin McGuinness and **Gabriel-Miro Muntean**, *“Automatic CNN-based Enhancement of 360° Video Experience with Multisensorial Effects”*, IEEE Access, vol. 9, September 2021, pp. 133156-133169 - Impact Factor: 3.367

- 138)** Abid Yaqoob and **Gabriel-Miro Muntean**, *“A Combined Field-of-View Prediction-assisted Viewport Adaptive Delivery Scheme for 360° Videos”*, IEEE Transactions on Broadcasting, vol. 67, no. 3, September 2021, pp. 746-760 - IF: 3.863
- 137)** Ioan-Sorin Comsa, Andreea Molnar, Irina Tal, Per Bergamin, **Gabriel-Miro Muntean**, Cristina Muntean and Ramona Trestian, *“A Machine Learning Resource Allocation Solution to Improve Video Quality in Remote Education”*, IEEE Transactions on Broadcasting, vol. 67, no. 3, September 2021, pp. 664-684 - Impact Factor: 3.863
- 136)** Dan Zhao, Cristina Muntean, Adriana Chis and **Gabriel-Miro Muntean**, *“Learner Attitude, Educational Background and Gender Influence on Knowledge Gain in a Serious Games-Enhanced Programming Course”*, IEEE Transactions on Education, vol. 64, no. 3, August 2021, pp. 308-316 - Impact Factor: 2.116
- 134)** Anderson Augusto Simiscuka and **Gabriel-Miro Muntean**, *“REMOS-IoT - A Relay and Mobility Scheme for Improved IoT Communication Performance”*, IEEE Access, vol. 9, May 2021, pp. 73000-73011 - Impact Factor: 3.367
- 133)** Ioan-Sorin Comsa, **Gabriel-Miro Muntean** and Ramona Trestian, *“An Innovative Machine Learning-based Scheduling Solution for Improving Live UHD Video Streaming Quality in Highly Dynamic Network Environments”*, IEEE Transactions on Broadcasting, vol. 67, no. 1, March 2021 - Impact Factor: 3.419, pp. 119-130
- 132)** Lujie Zhong, Changqiao Xu, Jiwei Chen, Weiqi Yan, Shujie Yang and **Gabriel-Miro Muntean**, *“Joint Optimal Multicast Scheduling and Caching for Improved Performance and Energy Saving in Wireless Heterogeneous Networks”*, IEEE Transactions on Broadcasting, vol. 67, no. 1, March 2021 - Impact Factor: 3.419, pp. 212-224
- 131)** Muhammad Ibrar, Lei Wang, **Gabriel-Miro Muntean**, Jenhui Chen, Nadir Shah, Aamir Akbar, *“IHSF: An Intelligent Solution for Improved Performance of Reliable and Time-sensitive Flows in Hybrid SDN-based FC IoT Systems”*, IEEE IoT Journal, vol. 8, no. 5, March 2021, pp. 3130-3142 - Impact Factor: 9.936

## 2020

- 129)** Kai Gao, Changqiao Xu, Ping Zhang, Jiuren Qin, Lujie Zhong, **Gabriel-Miro Muntean**, *“GCH-MV: Game-enhanced Compensation Handover Scheme for Multipath TCP in 6G Software Defined Vehicular Networks”*, IEEE Transactions on Vehicular Technology, vol. 69, no. 12, December 2020, pp. 16142-16154 - Impact Factor: 5.379
- 128)** Abid Yaqoob, Ting Bi and **Gabriel-Miro Muntean**, *“A Survey on Adaptive 360° Video Streaming: Solutions, Challenges, and Opportunities”*, IEEE Communications Surveys and Tutorials, vol. 22, no. 4, Fourth Quarter, December 2020, pp. 2801-2838 – Impact Factor: 23.700
- 127)** Mohammed A. Togou, Ting Bi, Kapal Dev, Kevin McDonnell, Aleksandar Milenovic, Hitesh Tewari and **Gabriel-Miro Muntean**, *“DBNS: A Distributed Blockchain-Enabled Network Slicing Framework for 5G Networks”*, IEEE Communications Magazine, vol. 58, no. 11, November 2020, pp. 90-96 - Impact Factor: 11.052
- 126)** Zhenhui Yuan and **Gabriel-Miro Muntean**, *“AirSlice - A Novel Network Slicing-based Framework for UAV Communications”*, IEEE Communications Magazine, vol. 58, no. 11, November 2020, pp. 62-68 - Impact Factor: 11.052
- 125)** Anshul Thakur, Swades De, and **Gabriel-Miro Muntean**, *“Co-channel Secondary Deployment over DTV Bands using Reconfigurable Radios”*, IEEE Transactions on Vehicular Technologies, vol. 69, no. 10, October 2020 - Impact Factor: 5.379
- 123)** Jon Montalban, **Gabriel-Miro Muntean** and Pablo Angueira, *“A Utility-based Framework for Performance and Energy-aware Convergence in 5G Heterogeneous Network Environments”*, IEEE Transactions on Broadcasting, vol. 66, no. 2, June 2020, pp. 589-599 - Impact Factor: 4.374
- 122)** Ioan-Sorin Comsa, Ramona Trestian, **Gabriel-Miro Muntean**, and Gheorghita Ghinea, *“SMART: A 5G sMART Scheduling Framework for Optimizing QoS Through Reinforcement Learning”*, IEEE Transactions on Network and Service Management, vol. 17, no. 2, June 2020 - Impact Factor: 5.930, pp. 1110-1124
- 121)** Mu Wang, Changqiao Xu, Xingyan Chen, Lujie Zhong, **Gabriel-Miro Muntean**, *“Decentralized Asynchronous Optimization for Dynamic Adaptive Multimedia Streaming over Information Centric Networking”*, Elsevier Journal of Network and Computer Applications, vol. 157, May 2020 - Impact Factor: 5.273
- 119)** Bao-Nguyen Trinh, Liam Murphy and **Gabriel-Miro Muntean**, *“A Reinforcement Learning-based Duty Cycle Adjustment Technique in Wireless Multimedia Sensor Networks”*, IEEE Access, vol. 8, March 2020, pp. 58774-58787 - Impact Factor: 3.745
- 118)** Matteo Anedda, Maurizio Murrone and **Gabriel-Miro Muntean**, *“A Novel Markov Decision Process-based Solution for Improved Quality Prioritized Video Delivery”*, IEEE Transactions on Network and Service Management, vol. 17, no. 1, Mar. 2020, pp. 592-606 - Impact Factor: 5.930
- 114)** Gianluca Cornetta, Abdellah Touhafi, Mohammed Amine Togou, **Gabriel-Miro Muntean**, *“Fabrication-as-a-Service: A Web-based Solution for STEM Education using Internet of Things”*, IEEE IoT Journal, vol. 7, no. 2, Feb. 2020, pp. 1519 - 1530 - Impact Factor: 9.936