Pablo Jiménez Mateo, PhD

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WORK EXPERIENCE

BigML December 2022 - Present

Senior Full Stack Engineer

Developing end-to-end solutions with applied machine learning.

BigML December 2021 - December 2022

Machine Learning Engineer

Developing end-to-end solutions with applied machine learning.

LANGUAGES AND TECHNOLOGIES

Computer Languages
Python, Javascript (Vue, jQuery), CSS, HTML, Java, C/C++, Assembly.
Software & Tools
Django, PostgreSQL, MongoDB, Linux, Keras, LATEX, GIT, MATLAB.

Languages English (CAE Grade A), Spanish (Native), Catalan (Native).

EDUCATION

Universidad Carlos III de Madrid Se

September 2016 - December 2021

Ph.D. (4-year degree) in Telematics Engineering, December 2021. M.Sc. (1-year degree) in Telematics Engineering, September 2017.

Universitat Jaume I

September 2009 - November 2016

M.Sc. (1-year degree) in Intelligent Systems, November 2016.

B.S. (4-year degree) in Computer Engineering, specialty in Information Technologies, July 2015.

B.S. (4-year degree) in Computational Mathematics with intensification in Mathematics, July 2014.

• Erasmus program in Oulu University, Finland. 2011-2012, 9 months.

Postgraduate Course in applied computer security: attack and defense, 2012.

RESEARCH EXPERIENCE

IMDEA Networks Institute

September 2016 - August 2021

Telecommunications Researcher

Network management and control for mmWave communications.

Supervisor: Joerg Widmer.

University of Washington

March 2019 - June 2019

PhD internship

Improving device discovery for 802.11ad and 802.11ay.

Supervisor: Sumit Roy.

Universitat Jaume I

May 2016 - July 2016

Research Assistant

Design and development of a distributed system using agents for traffic analysis in real time.

Universitat Jaume I

March 2015 - July 2015

Research Assistant

Design and development of a self-organized system for emergency management traffic access.

Universitat Jaume I

October 2014 - January 2015

Research Assistant

Generation of georeferenced alerts based on the study of the interaction of users in social networks.

TEACHING EXPERIENCE

Universidad Carlos III de Madrid

September 2019 - December 2019

Venia docendi

Teaching Access networks and shared media.

Universidad Carlos III de Madrid

September 2018 - December 2018

 $Venia\ docendi$

Teaching Access networks and shared media.

Universidad Carlos III de Madrid

September 2018 - December 2018

Bachelor thesis supervisor

Interactive visualization of multifrequency coverage using virtual reality.

PUBLICATIONS

- [1] Blanco, Alejandro and Jiménez Mateo, Pablo and Gringoli, Francesco and Widmer, Joerg Augmenting mmWave localization accuracy through sub-6 GHz on off-the-shelf devices. Proceedings of the 20th Annual International Conference on Mobile Systems, Applications and Services (MobiSys 2022).
- [2] Grosheva, Nina and Assasa, Hany and Ropitault, Tanguy and Jiménez Mateo, Pablo and Widmer, Joerg and Golmie, Nada A Comprehensive Analysis and Performance Enhancements for the IEEE 802.11ay Group Beamforming Protocol. IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM 2022).
- [3] Garcia, Dolores and Omar Lacruz, Jesús and Jiménez Mateo, Pablo and Palacios, Joan and Ruiz, Rafael and Widmer, Joerg Scalable Phase-Coherent Beam-Training for Dense Millimeter-wave Networks. IEEE Transactions of Mobile Computing 2021 (TMC 2021).
- [4] Rea, Maurizio and Giustiniano, Domenico and Jiménez Mateo, Pablo and Lizarribar, Yago and Widmer, Joerg Beam Searching for mmWave Networks with sub-6 GHz WiFi and Inertial Sensors Inputs: an experimental study. Computer Networks 2021 (COMNET 2021).
- [5] Omar Lacruz, Jesús and Garcia, Dolores and Jiménez Mateo, Pablo and Palacios, Joan and Widmer, Joerg *High-Speed Millimeter-Wave Mobile Experimentation on Software-Defined Radios*. Get-Mobile: Mobile Computing and Communications (GetMobile 2021).
- [6] Omar Lacruz, Jesús and Garcia, Dolores and Jiménez Mateo, Pablo and Palacios, Joan and Widmer, Joerg mm-FLEX: An Open Platform for Millimeter-Wave Mobile Full-Bandwidth Experimentation. ACM International Conference on Mobile Systems, Applications, and Services (ACM MobiSys 2020).
- [7] Garcia, Dolores and Omar Lacruz, Jesús and Jiménez Mateo, Pablo and Widmer, Joerg *POLAR:* Passive object localization with IEEE 802.11ad using phased antenna arrays. IEEE International Conference on Computer Communications (IEEE INFOCOM 2020).
- [8] Fiandrino, Claudio and Blanco, Alejandro and Jiménez Mateo, Pablo and Andrés Ramiro, Carlos and Ludant, Norbert and Widmer, Joerg openLEON: An end-to-end emulator from the edge data center to the mobile user. Computer Communications, 2019.
- [9] Blanco, Alejandro and Ludant, Norbert and Jiménez Mateo, Pablo and Shi, Zhenyu and Wang, Yi and Widmer Joerg *Performance Evaluation of Single Base Station ToA-AoA Localization in an LTE Testbed.* IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (IEEE PIMRC 2019).
- [10] Jiménez Mateo, Pablo and Fiandrino, Claudio and Widmer Joerg Analysis of TCP Performance in 5G mm-wave Mobile Networks. IEEE International Conference on Communications (ICC 2019), 20-24 May 2019.

- [11] Jiménez Mateo, Pablo and Blanco, Alejandro and Ludant, Norbert and Marugan Borelli, Matteo and García-García, Amanda and Loch, Adrian and Shi, Zhenyu and Wang, Yi and Widmer, Joerg A Comprehensive Study of Low Frequency and High Frequency Channel Correlation. International Conference on Computing, Networking and Communications (ICNC 2019).
- [12] Andrés Ramiro, Carlos and Fiandrino, Claudio and Blanco, Alejandro and Jiménez Mateo, Pablo and Ludant, Norbert and Widmer, Joerg *OpenLEON: An End-to-End Emulator from the Edge Data Center to the Mobile User.* Proceedings of the 12th International Workshop on Wireless Network Testbeds, Experimental Evaluation & Characterization (WiNTECH 18), 2018, doi:10.1145/3267204.3267210.
- [13] Vicente Ramón Tomás López, Luis Amable García Fernández, José F. García Calderaro, Pablo Jiménez Mateo Diseño y desarrollo de un sistema auto-organizado para la gestión de emergencias de tráfico en los accesos a Castellón de la Plana. Autoria. Científic, 2016. ISBN 9788460889878. Castellón (Espanya). Ed. Fundación Dávalos-Fletcher.

PARTICIPATION IN PROJECTS

Advanced Techniques to Strengthen the Intelligence of 5G Networks

2019-2022

Reference: P2018/TCS-4496

Principal investigator: Domenico Giustiniano Financing entity: Comunidad de Madrid

ICE-T: RC: Performance Evaluation of Advanced Wireless Network Edge Infrastructure - Network Simulation & Test Beds 2018-2021

Reference: 1836725

Principal investigator: Sumit Roy

Financing entity: CNS Division Of Computer and Network Systems

SEARCHLIGHT: A new communication paradigm for future very high speed 2017-2019

Reference: ERC CoG 617721

Principal investigator: Joerg Widmer

Financing entity: European Research Council

Integrated Development and Operational Technologies of 5G Networks 2017-2018

Reference: S2013/ICE-2919

Principal investigator: Joerg Widmer Financing entity: Comunidad de Madrid

LF assists HF in beam tracking and mobility

2017-2018

Reference: Huawei HF2016120010 Principal investigator: Joerg Widmer

Financing entity: Huawei Technologies (China)