

Carlos A. Viteri-Mera

Associate Professor
Department of Electronics Engineering
Universidad de Nariño
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Education

Ph.D. Electrical and Computer Engineering, The Ohio State University, Columbus, OH, 2018.
M.S. Electrical and Computer Engineering, The Ohio State University, Columbus, OH, 2015.
M.S. Electronics and Computer Engineering, Universidad de los Andes, Bogotá, Colombia, 2010.
B.S. Electronics and Telecommunications Engineering, Universidad del Cauca, Popayán, Colombia, 2006.

Fields of Research Interest

Wireless communications, applied electromagnetics, and signal processing.

Academic Experience

Universidad de Nariño, Department of Electronics Engineering, Pasto, Colombia.
Associate Professor. May, 2020 - **Present**.
Assistant Professor. December, 2014 - May, 2020.
Instructor. September, 2010 - December, 2014.

The Ohio State University, ElectroScience Laboratory, Columbus, OH.
Graduate Teaching Associate. August, 2016 - May 2018.
Fulbright Fellow. August, 2013 - August, 2016.

Universidad de los Andes, Department of Electrical and Electronics Engineering, Bogotá, Colombia.
Teaching and Research Assistant. January, 2008 - July, 2010.

Honors, Awards and Scholarships

International Union of Radio Science (URSI)
Travel Fellowship Grant Award, National Radio Science Meeting, Boulder, CO, January 2017.

U.S. Department of State
Fulbright Colombia Scholarship for PhD studies, May 2013.

IEEE Antennas and Propagation Society (AP-S)
Second place in the Student Antenna Design Challenge. IEEE International Symposium on Antennas and Propagation, Chicago, IL, July 2012.

Universidad de los Andes, Department of Electrical and Electronics Engineering
Best Master's Thesis Award, March 2010.

Universidad del Cauca
Honors for outstanding academic performance during undergraduate studies, 2001 - 2006.

Colombian Ministry of Education

Andrés Bello State Distinction for obtaining the 39th score nationwide and the 1st in the region of Nariño in the college admission exams (ICFES), February 2001.

ECOPETROL (Colombian Petroleum Company)

Scholarship for undergraduate studies based on the college admission exams score. December 2001.

Volunteer Work

Reviewer for International Journals

IEEE Transactions on Wireless Communications.
IEEE Transactions on Communications.
IEEE Journal on Selected Areas in Communications.
IEEE Communication Letters.
IEEE Transactions on Information Forensics and Security.
IEEE Transactions on Geoscience and Remote Sensing.
Elsevier AEÜ - International Journal of Electronics and Communications.
IEEE Latin America Transactions (Revista IEEE América Latina).

Reviewer for Colombian Journals

Revista de Ingeniería, Universidad de los Andes.
Revista Facultad de Ingeniería, Universidad de Antioquia.
Revista Tecnura, Universidad Distrital Francisco José de Caldas.
Revista Universitaria en Telecomunicaciones, Informática y Control, Universidad del Cauca.

IEEE Volunteer Work

IEEE Student Branch Advisor at Universidad de Nariño, Pasto, Colombia, 2012-2013.
IEEE Colombian Conference on Communications and Computing (COLCOM) Technical Committee Member, 2015 - 2017.

Publications

Journal Papers

1. A. Chaves-Villota and **Carlos A. Viteri-Mera**, “DeepREM: Deep-Learning-Based Radio Environment Map Estimation From Sparse Measurements,” in *IEEE Access*, vol. 11, pp. 48697-48714, 2023. Available (open access): <https://ieeexplore.ieee.org/document/10127968>
2. **Carlos A. Viteri-Mera** and Fernando Teixeira, “Equalized Time Reversal Beamforming for Frequency-Selective Indoor MISO Channels,” in *IEEE Access*, vol. 5, pp. 3944-3957, March 2017. Available (open access): <http://ieeexplore.ieee.org/document/7878569/>
3. Nesly D. Castro, Luis E. Chamorro, y **Carlos A. Viteri-Mera**, [in spanish] “Una Red de Sensores Inalámbricos para la Automatización y Control del Riego Localizado,” *Revista de Ciencias Agrícolas*, vol. 33, pp. 106-116, 2016. Available (open access): <http://revistas.udenar.edu.co/index.php/rfacia/article/view/3105/3703>

4. **Carlos A. Viteri-Mera** and Fernando Teixeira, “Space-Time Block Diagonalization for Frequency-Selective MIMO Broadcast Channels,” in *IEEE Access*, vol. 4, pp. 6602-6613, August 2016. Available (open access): <http://ieeexplore.ieee.org/document/7593240/>
5. Jesús Viveros and **Carlos A. Viteri-Mera**, “A Bio-Inspired Patch Antenna Array Based on Fibonacci Sequences in Trees”, *IEEE Antennas and Propagation Magazine*, vol. 55, no. 5, pp. 192-201, October 2013.
6. **Carlos A. Viteri-Mera** and Javier Gómez, [in spanish] “Propuesta para la Interconexión WLAN Multicelda Basada en el Estándar IEEE 802.11e y DiffServ”, *Revista Sistemas & Telemática*, Universidad ICESI, Colombia, July 2008.

Preprints

1. **Carlos A. Viteri-Mera** and Fernando Teixeira, “Beamforming Algorithm for Multiuser Wideband Millimeter-Wave Systems with Hybrid and Subarray Architectures,” *arXiv*, abs/1905.03918, March 2019. Available: <https://arxiv.org/abs/1905.03918>
2. **Carlos A. Viteri-Mera** and Fernando Teixeira, “Interference-Nulling Time-Reversal Beamforming for mm-Wave Massive MIMO in Multi-User Frequency-Selective Indoor Channels,” *arXiv*, abs/1411.6897, 2015. Available: <http://arxiv.org/abs/1506.05143>

Conference Papers/Presentations

1. Sebastián Eraso-Misnaza, Juan G. Eraso-Trejo, Darío F. Fajardo-Fajardo, and **Carlos A. Viteri-Mera**, “Statistical Characterization of Path-Loss for 900 MHz LoRa Using a Bike-Share IoT Network”, *7th IEEE World Forum on the Internet of Things*, New Orleans, LA, June 2021.
2. Andrés Pantoja and **Carlos A. Viteri-Mera**, “Optimal Power Allocation in Multicarrier Mobile Communications Using Replicator Dynamics,” *IEEE Colombian Conference on Automatic Control*, Medellín, Colombia, October 2019.
3. **Carlos A. Viteri-Mera** and Fernando Teixeira, “Beam Selection in Multiuser Millimeter-Wave Systems with Subarray User Terminal Architectures,” *SBMO/IEEE MTT-S International Microwave and Optoelectronics Conference (IMOC)*, Águas de Lindóia, São Paulo, Brazil, August 2017.
4. **Carlos A. Viteri-Mera** and Fernando Teixeira, “Polarimetric Interference Alignment in MIMO Broadcast Channels”, *USNC-URSI National Radio Science Meeting (NRSM)*, Boulder, CO, January 2017.
5. **Carlos A. Viteri-Mera** and Fernando Teixeira, “Block Diagonalization for Frequency-Selective Multiuser-MIMO Downlinks”, *IEEE Global Communications Conference (GLOBECOM)*, Washington, DC, December 2016.
6. **Carlos A. Viteri-Mera** and Fernando Teixeira, “Polarimetric Interference-Alignment Beamforming”, *IEEE International Symposium on Antennas and Propagation*, Fajardo, Puerto Rico, July 2016.
7. **Carlos A. Viteri-Mera** and Fernando Teixeira, “Feasibility Analysis of Polarimetric-Interference Alignment Beamforming in Rich-Scattering Indoor Channels”, *IEEE International Symposium on Antennas and Propagation*, Fajardo, Puerto Rico, July 2016.
8. **Carlos A. Viteri-Mera**, Fernando Teixeira, and Kamalesh Sainath, “Interference-Nulling Time-Reversal Beamforming for mm-Wave Massive MIMO Systems”, *IEEE International Conference on Microwaves, Communications, Antennas and Electronic Systems (COMCAS)*, Tel Aviv, Israel, November 2015.
9. **Carlos A. Viteri-Mera** and Fernando Teixeira, “Regularized Time-Reversal Beamforming for mm-Wave Massive MIMO Systems”, *IEEE International Symposium on Antennas and Propagation*, Vancouver, Canada, July 2015.
10. **Carlos A. Viteri-Mera** and Fernando Teixeira, “Space-Time Focusing Performance of Time-Reversal Beamforming in Rich-Scattering Indoor Channels”, *IEEE International Symposium on Antennas and Propagation*, Vancouver, Canada, July 2015.

11. **Carlos A. Viteri-Mera** and Fernando Teixeira, “Analysis of Time-Reversal MUSIC Beamforming for Indoor WLAN Systems”, *IEEE International Symposium on Antennas and Propagation*, Memphis, TN, July 2014.
12. **Carlos A. Viteri-Mera** and Fernando Teixeira, “Performance Comparison of Time-Reversal Beamforming in Wireless Local Area Networks”, *IEEE International Symposium on Antennas and Propagation*, Memphis, TN, July 2014.
13. **Carlos A. Viteri-Mera**, Alexander Obando, and Andrés Rodríguez, “Optimization of Radio Network Design Problems for WLANs using Propagation Simulations”, *IEEE Latin American Conference on Communications (LATINCOM)*, Cuenca, Ecuador, November 2012.
14. **Carlos A. Viteri-Mera** and Juan Bohórquez, “Design and Simulation of a Multilayer Dual Behavior Resonator Microwave Filter”, *IEEE Latin American Conference on Communications (LATINCOM)*, Bogotá, Colombia, September 2010.
15. Javier Gómez and **Carlos A. Viteri-Mera**, [in spanish] “Diseño de una red multicelda basada en el estándar IEEE 802.11e y Diffserv”, *IEEE Colombian Conference on Communications (COLCOM)*, Bogotá, Colombia, 2007.
16. **Carlos A. Viteri-Mera**, Oscar Calderón, and Mario Caicedo, [in spanish] “Aproximación a una Visión Multinivel de la Calidad de Servicio”, *IEEE Colombian Conference on Communications (COLCOM)*, Bogotá, Colombia, 2007.

Professional Affiliations

IEEE Senior Member.

Languages

Spanish, mother tongue.

English, fluent.

Last updated: July 7, 2023.