

Miguel Ángel Bautista, Ph.D.

Contact Information

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Education

- **Ph.D., Machine Learning & Mathematics**, University of Barcelona, February 2016
- **M.Sc., Artificial Intelligence**, Universitat Politècnica de Catalunya, July 2010
- **B.Sc., Computer Science**, University of Barcelona, January 2010

Research Interests

Generative Modeling, Geometric Deep Learning, Computer Vision & 3D, ML for Biology

Professional Experience

- **Staff Research Scientist**, Apple MLR (Sept 2021 - Present). Google Scholar: 2544
- **Senior Research Scientist**, Apple MLR (Sept 2017 - Sept 2021)
- **Postdoctoral Fellow**, Heidelberg Colaboratory for Image Processing, Heidelberg University (July 2015 - July 2017)
- **Research Scholar**, Carnegie Mellon University (January 2013 - July 2013)

Full publication list

- [1] Samira Abnar, Omid Saremi, Laurent Dinh, Shantel Wilson, Miguel Angel Bautista, Chen Huang, Vimal Thilak, Etai Littwin, Jiatao Gu, Josh Susskind, et al. Adaptivity and modularity for efficient generalization over task complexity. *arXiv preprint arXiv:2310.08866*, 2023.

- [2] Xavier Baro, Jordi Gonzalez, Junior Fabian, Miguel A. Bautista, Marc Oliu, Hugo Jair Escalante, Isabelle Guyon, and Sergio Escalera. Chalearn looking at people 2015 challenges: Action spotting and cultural event recognition. In *IEEE Computer Vision and Pattern Recognition Workshops*, 2015.
- [3] Dina Bashkirova, Ben Usman, Kate Saenko, Pengsheng Guo, Miguel Angel Bautista, Alex Colburn, M Susskind, Qi Shan, Aamir Mustafa, Aliaksei Mikhailiuk, et al. Wacv 2022.
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- [5] MA Bautista, X Baro, O Pujol, P Radeva, J Vitria, and S Escalera. Compact evolutive design of error-correcting output codes. In *European Conference on Machine Learning Workshops*, volume 1, pages 119–128. LNCS, 2010.
- [6] Miguel Bautista, Sergio Escalera, Xavier Baró, Oriol Pujol, Jordi Vitria, and Petia Radeva. On the design of low redundancy error-correcting output codes. In *Ensembles in Machine Learning Applications*, volume 1, pages 21–38. Springer, 2011.
- [7] Miguel Bautista, Oriol Pujol, Xavier Baró, and Sergio Escalera. Introducing the separability matrix for error correcting output codes coding. *Multiple Classifier Systems*, pages 227–236, 2011.
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- [9] Miguel A Bautista, Artsiom Sanakoyeu, and Björn Ommer. Deep unsupervised similarity learning using partially ordered sets. In *IEEE CVPR*, 2017.
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- [11] Miguel Angel Bautista, Xavier Baró, Oriol Pujol, Petia Radeva, Jordi Vitrià, and Sergio Escalera. Compact evolutive design of error-correcting output codes error correcting output codes.
- [12] Miguel Angel Bautista, Sergio Escalera, Xavier Baró, and Oriol Pujol. Analyzing the separability matrix for ecoc coding.
- [13] Miguel Ángel Bautista, Sergio Escalera, Xavier Baró, and Oriol Pujol. A genetic inspired optimization for ecoc. In *Structural, Syntactic, and Statistical Pattern Recognition*, volume 1, pages 743–751. Springer Berlin Heidelberg, 2012.
- [14] Miguel Ángel Bautista, Sergio Escalera, Xavier Baró, and Oriol Pujol. On the design of an ecoc-compliant genetic algorithm. *Pattern Recognition*, 47(2):865–884, 2013.
- [15] Miguel Ángel Bautista, Sergio Escalera, Xavier Baró, Petia Radeva, Jordi Vitrià, and Oriol Pujol. Minimal design of error-correcting output codes. *Pattern Recognition Letters*, 33(6):693–702, 2011.
- [16] Miguel Angel Bautista, Pengsheng Guo, Samira Abnar, Walter Talbott, Alexander Toshev, Zhuoyuan Chen, Laurent Dinh, Shuangfei Zhai, Hanlin Goh, Daniel Ulbricht, et al. Gaudi: A neural architect for immersive 3d scene generation. *Advances in Neural Information Processing Systems*, 35:25102–25116, 2022.

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- [18] Miguel Angel Bautista, Antonio Hernández-Vela, Victor Ponce, Xavier Perez-Sala, Xavier Baró, Oriol Pujol, Cecilio Angulo, and Sergio Escalera. Probability-based dynamic time warping for gesture recognition on rgb-d data. In *International Conference on Pattern Recognition Workshops, Advances in Depth Image Analysis and Applications*, pages 126–135. LNCS 7854 - Springer, 2012.
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Scientific Service

- AC: ICLR24, ICLR25, ICML24, ICML25, NeurIPS23, NeurIPS24, NeurIPS25
- Reviewer: NeurIPS15-22, CVPR13-23, ICML15-23, ECCV13-17, ICCV13-17

Patents

- Generative Scene Networks, US12198275
- Neural Rendering, US11967015

Honors and Awards

- Best B. Sc. thesis on Artificial Intelligence 2010 in Catalonia by the Catalan Association of Artificial Intelligence.
- Best Ph. D thesis of 2016 by the School of Mathematics at University of Barcelona

Languages

English (Native), Spanish (Native), Catalan (Native), Italian (Beginner), German (Beginner)

References

Available upon request.