German Barquero

Curriculum Vitae

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Google Scholar for Full List of Publications

EDUCATION

2022 – 2025 **PhD in Mathematics and Computer Science**
SUMMER SCHOOLS: ICVSS'23, GEMSS'23
Universitat de Barcelona

2020 – 2021 **Master in Computer Vision**
BEST STUDENT AWARD (1/30)
Universitat Autònoma de Barcelona

2014 – 2020 **Bachelor of Mathematics**
Bachelor of Computer Science
Universitat de Barcelona

RESEARCH EXPERIENCE

JUN 2024 - NOV 2024 (FT - 6 MONTHS)

Meta Reality Labs
Research scientist intern

I developed a novel real-time method for synthesizing full-body human motion from sparse and unreliable signals. The resulting paper was published in CVPR 2025.

MAR 2021 - FEB 2022 (FT - 1 YEAR)

Universitat de Barcelona
Graduate research intern

I led the organization of the *Behavior Prediction* competition within the scopes of the DYAD ICCV'21 workshop. I conducted research on novel models that established a strong baseline on this problem for the novel UDIVA v0.5 dataset.

SEP 2020 - MAR 2021 (PT - 7 MONTHS)

Herta Security
Applied research scientist

I developed a very fast and accurate face tracking algorithm (T-BIOM 2021) and worked on quantization and object detection.

SEP 2019 - AUG 2020 (FT - 1 YEAR)

École polytechnique fédérale de Lausanne + CHUV
Graduate research intern

In collaboration with an interdisciplinary medical imaging team, I explored the capabilities of several MRI modalities for detecting paramagnetic rim lesions in multiple sclerosis (RimNet, *NeuroImage: Clinical*) and the challenges of ultra-high-field MRI.

JUN 2019 - SEP 2019 (FT - 4 MONTHS)

Herta Security
Undergraduate research intern

I conducted research on efficient tracking algorithms. I collected and annotated a dataset for face tracking in large crowds and developed a fast novel face tracking algorithm (awarded at IJCB 2020).

TECHNICAL SKILLS

INTERMEDIATE C++, Java, Keras, OpenVINO
EXPERT Python, TensorFlow, PyTorch
OpenCV, LaTeX

SELECTED PUBLICATIONS

Barquero, G., et al. (2025). From Sparse Signal to Smooth Motion: Real-Time Motion Generation with Rolling Prediction Models. ***CVPR 2025***.

Ruiz-Ponce, P., **Barquero, G.**, et al. (2025). MixerMDM: Learnable Mixing of Human Motion Diffusion Models. ***CVPR 2025***.

Barquero, G., Escalera, S., and Palmero, C. (2024). Seamless Human Motion Composition with Blended Positional Encodings. ***CVPR 2024 (>200 ☆)***.

Ruiz-Ponce, P., **Barquero, G.**, et al. (2024). in2IN: Leveraging individual Information to Generate Human INteractions. ***CVPR Workshops 2024***.

Song, S., Spitale, M., Luo, C., Palmero, C., **Barquero, G.**, et al. (2024). REACT 2024: the Second Multiple Appropriate Facial Reaction Generation Challenge. ***FG Challenge 2024***.

Barquero, G., Escalera, S., and Palmero, C. (2023). BeLFusion: Latent Diffusion for Behavior-Driven Human Motion Prediction. ***ICCV 2023 (>100 ☆)***.

Song, S., Spitale, M., Luo, C., **Barquero, G.**, et al. (2023). REACT2023: The First Multiple Appropriate Facial Reaction Generation Challenge. ***ACM MM Challenge 2023***.

Barquero, G., et al. (2022). Didn't see that coming: a survey on non-verbal social human behavior forecasting. ***ICCV Workshops 2021***.

Barquero, G., et al. (2022). Comparison of Spatio-Temporal Models for Human Motion and Pose Forecasting in Face-to-Face Interaction Scenarios. ***ICCV Workshops 2021***.

Palmero, C., **Barquero, G.**, et al. (2022). Chalearn LAP challenges on self-reported personality recognition and non-verbal behavior forecasting during social dyadic interactions: Dataset, design, and results. ***ICCV Workshops 2021***.

Barquero, G., Hupont, I., and Fernandez, C. (2021). Rank-based verification for long-term face tracking in crowded scenes. ***IEEE T-BIOM***.

Barquero, G., Fernandez, C., and Hupont, I. (2020). Long-Term Face Tracking for Crowded Video-Surveillance Scenarios. ***IJCB 2020***. *Best student paper award (runner-up).*

Barquero, G., et al. (2020). RimNet: A deep 3D multimodal MRI architecture for paramagnetic rim lesion assessment in multiple sclerosis. ***NeuroImage: Clinical***.

TALKS

2024/12. DLBCN (Barcelona). FlowMDM: Seamless Human Motion Composition with Blended Positional Encodings.
2024/10. Google (Zurich). Inductive Biases in Motion: Human Motion Priors and Diffusion Models.
2024/06. Meta Reality Labs (Zurich). FlowMDM: Seamless Human Motion Composition with Blended Positional Encodings.
2023/12. DLBCN (Barcelona). BeLFusion: Latent Diffusion for Behavior-Driven Human Motion Prediction.

TEACHING

2024, 2025. Flows and Diffusion Models, and Video Generative Models (Master in Computer Vision, UAB). **2022.** Advanced Algorithms (Bachelor in Computer Science, UB).

SUPERVISION

Master's thesis

Pablo Ruiz Ponce (2023). Text-Driven Multi-Human Motion Generation. *Universitat de Barcelona*.

Àlex Pujol Vidal (2023). Motion Binary Latent Diffusion. *Universitat de Barcelona*.

Johnny Núñez Cano (2022). Comparison of Spatio-Temporal Hand Pose Denoising Models. *Universitat de Barcelona*.

Nikita Belooussov (2022). Generating Sign Language Videos using DDPM. *Universitat de Barcelona*.

REVIEWING

Journals.

International Journal of Computer Vision (**2023, 2024**)
International Journal of Social Robotics (**2023, 2024**)
Transactions on Visualization and Computer Graphics (**2022**)
Machine Learning (**2022**)

Conferences.

CVPR (**2024, 2025**), ECCV (**2024**), ACM Multimedia (**2023**), WACV (**2022**), BMCV (**2022**)