GIACOMO GEROTTO

Motion Capture Specialist · Shoots, Capture Technology & Pipelines

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Open to relocation and travel

PROFILE

Motion capture specialist with five years at GPEM, the sole Vicon distributor for Italy, Malta and the Balkans: I run client shoots end to end for game studios, immersive productions and live events through its entertainment division (GPEM Entertainment, formerly Omnicap), and I install, train and support customers on Vicon, Xsens, Manus, Captury and Faceware, from entertainment studios to API integrations. On every client shoot I plan and sequence the sessions with the client's lead animator and director, prepare props and set pieces, lead a 1–2 person crew, own all technical issues during takes, check the data before wrap and deliver solved or cleaned, retargeted data. Hands-on with Vicon (setup, capture, processing), Xsens, head-mounted cameras and MotionBuilder: finger capture with live Unreal/MetaHuman previs, tracked props and a rotation-accurate football, split body/face performance capture locked with timecode, and a 20-minute single-take live avatar show. Background in computer graphics and Unity/C#, so I know what animation and engine teams need downstream. I work closely with Vicon's entertainment support and training teams in the UK.

CORE SKILLS

- **Shoot supervision:** take-list scoping, shoot sequencing and session planning; layout, prop and set-piece prep, crew lead, performer briefing and calibration (ROM), co-directing with animation leads and directors, take naming, notes and selects, data checks before wrap to avoid reshoots, on-set troubleshooting, schedule control
- **Volume & capture:** camera layout per session, threshold/strobe and frame-rate tuning, reflection management, tracked props and objects, custom marker layouts, 3D-printed mounts and rigs for unusual objects and wearables (Bambu Lab, Cura), contact-accurate set builds from client 3D models, finger capture, temporary volume installs
- **Optical:** Vicon Shōgun Live & Post, Vicon Nexus, Valkyrie / Vantage / Vero cameras, Vicon Lock Lab
- **Inertial, hands, face, markerless:** Xsens MVN Analyze (Awinda), Manus Quantum Metagloves, Faceware Mark IV head-mounted camera with Faceware Studio, Analyzer and Retargeter, Captury, Movella DOT
- **Other capture & XR:** iPhone ARKit face capture, Rokoko, HTC Vive, Meta Quest / Oculus
- **Sync & real-time:** genlock, timecode and camera tracking (Blackmagic SDI camera with tracking crown → Vicon Lock → Evertz timecode → Blackmagic sync generator), Tentacle Sync timecode, Lab Streaming Layer, live streaming to Unreal Engine and Unity, MotionBuilder live retarget, hot-standby redundancy for live shows
- **Post & integration:** cleanup and solving, retargeting (incl. MetaHuman), FBX delivery, Maya, Blender, MotionBuilder, Unreal Engine, Unity
- **Development:** C#, Python, Unity plugins and editor tools, Shōgun/Nexus scripting

EXPERIENCE

GPEM srl — Genoa, Italy · motion capture systems: distribution, R&D and services (entertainment division: GPEM Entertainment, formerly Omnicap) Jul 2021 – present

Innovation Manager (continuing to lead client mocap shoots) Jan 2025 – present

- Lead client shoots end to end for game studios and immersive productions: session planning, crew lead, capture, post and delivery
- Technical lead and day-to-day project manager of MIMOSE, a publicly funded multi-sensor synchronised capture platform with two universities and a software house
- Scout and test new capture, XR and AI technologies and turn them into service offerings

Support & Technical Project Manager 2024 – 2025

- Led technical delivery of mocap productions for Italian and European game studios, from system design and on-set operation to data delivery
- Originated and ran GNVR Experience end to end: grant proposal, partners, Unity application and split body/face performance capture
- Technical support and training across Vicon, Xsens, Manus, Faceware and Captury for studios, universities and research institutes
- Advanced integration training with Vicon and Epic Games in Oxford and London

Support & Technical Motion Capture Specialist Jul 2021 – 2024

- From joining in 2021, tasked with growing GPEM, then mostly a team of biomedical engineers serving clinical and research labs, into entertainment and software development: technical pre-sales and sales enablement for film and game studios, research centres, VR/XR, game-engine and robotics integrations and product API integrations, alongside a capture service line whose clients now include several of Italy's largest game studios; installed Vicon systems, trained teams on site on Vicon and Shōgun, and still support customers including Stormind Games, Digital Kinetics (Zagreb), Rupture (Malta) and MCAST; installed Faceware and Manus systems at NABA, Milan, trained the team on site and supported them; supported three Faceware systems for the customers of French reseller PROGISS, at their request

- Ran capture sessions and post-production, from GPEM's first temporary volume to its permanent studio; installation, training, technical support and API integration across GPEM's full product range (Vicon as the main line, plus Xsens, Manus, Captury and Faceware Studio, Analyzer and Retargeter) for game and animation studios, universities and research labs
- Built and operated a live real-time avatar pipeline for a 20-minute corporate show (Xsens + Manus → MotionBuilder → Unreal)
- Built GPEM's in-house genlock, timecode and camera-tracking setup (2023–2024; Blackmagic SDI camera, Vicon Lock, Evertz timecode, Blackmagic sync generator, tracked camera crown), integration worked out closely with Vicon's engineers, for demos, and supported Digital Kinetics (Zagreb) and Rupture (Malta) on timecode and sync
- Wrote Unity plugins and Shōgun/Nexus scripts to automate capture and post workflows
- Trained customers and students on Vicon software

Game Development Instructor — Tree Open, Milan 2021

- Designed and taught a full game development course for 20+ students, including the final practical exam

SELECTED PRODUCTIONS as service provider via GPEM · clients under NDA anonymised

- **Card game, dealer performance capture to Unreal/MetaHuman** (game studio, 2026): 2 shoot days + half-day pre-capture; full body and 10-marker-per-hand finger capture on 26 Vicon cameras (16 Valkyrie VK26 + 10 Vero); contact-accurate table built to the client's 3D model; live retarget to Unreal for on-set previs; led cleanup, retargeting and FBX delivery; post-delivery Unreal integration support
- **Black Cats & Chequered Flags** (MIAT, 2024; Official Competition, Venice Immersive 2025; shown at Museo Ferrari Maranello and Silverstone Museum): 3 performers incl. a child; minimal wooden rigs at contact points built to the client's period-accurate car models; cleanup and retargeting onto 3 characters
- **Unreleased action game** (European publisher's studio, 2023–2024): returning client over 4 shoot days in 18 months; locomotion, combat, deaths, interactions, cutscenes; up to 3 performers, tracked rifles and furniture, finger capture on 2 performers simultaneously
- **Licensed motorsport racing game** (Italian game studio, 2025): 2 shoot days, up to 3 performers on a real motorcycle; low cameras and matte-taping to beat occlusion and reflections from the bike
- **Football app, player and ball capture** (2025): ball tracked for position and rotation with ~30 flat markers in six clusters after benchmarking retroreflective tapes; 150 Hz capture; cleanup by a technician under my direction
- **Weightless — cinematic VR experience and music video** (Vnova/ImmersiX and Chokolate TV, 2024; previewed at the 81st Venice Film Festival): trained and remotely supported the GPEM crew for an Xsens + Manus shoot in Paris; sole cleanup of US-captured Vicon body and finger data with the director
- **Novo Nordisk 100th anniversary** (Velvet Group, Rome, 2023): built and operated a live real-time avatar for a 20-minute single-take show; hot-standby MotionBuilder PC; anticipated IMU drift and had the exit reframed

SELECTED R&D AND TECHNICAL PROJECTS

- **GNVR Experience** (2024, Tech Transfer call, CTE Genova; credited mocap specialist): VR visit with an AI guide; originated the project and built the Unity app; split performance capture with Vicon body and fingers in Genoa and Faceware headcam face plus voice in Rome, locked with Tentacle Sync timecode
- **MIMOSE** (2024–2025, PNRR-funded; named Technical & Quality Lead in the project documents): multi-sensor capture platform synchronising Vicon, Movella DOT IMUs, Cometa EMG and RGB-D over Lab Streaming Layer, with live output to Unity/Unreal; technical lead and day-to-day project manager
- **Real-time full-body avatar for a VR research lab** (Politecnico di Torino, 2021–2022): Unity IK plugin driving a full avatar from 6–11 live Vicon rigid bodies, with in-build subject calibration
- **DIP Working** (2021, regional R&D consortium): underwater VR diver training; switched to markerless (Captury, 8 cameras in sealed housings at 5 m) because water absorbs near-infrared; software-integration lead and feasibility testing
- **Amarcord** (2022–2023; credited mocap specialist): dance capture on 28 Vicon Vantage cameras turned into steel and 3D-printed sculpture; designed the trajectory export the artist needed
- **Vola come una farfalla** (2021): support on a temporary 10 × 5 m Vicon install for an AR book with Olympic medallist Alessia Maurelli

EDUCATION, TRAINING AND LANGUAGES

- **Bachelor's-level degree (Diploma accademico di I livello), New Technologies for Art** — Accademia di Belle Arti di Brera, Milan · 2018–2021
- **Computer Graphics & Game Technologies** — BigRock (Autodesk Authorised Training Centre), Roncade · 2016–2017
- **Advanced training** — Vicon and Epic Games (mocap integration, real-time pipelines), Oxford and London · 2024–2025
- **Languages:** Italian (native) · English (professional working proficiency)