

SERGIO BROMBERG DIMATÉ

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PROFILE

I'm a creative technologist based in Bogotá, Colombia. I studied physics, but in my career I have always been in the crossroads between science and art. I have worked as a technology director and programmer of several art-projects that have involved robotics, data-visualization, computer-vision, internet-of-things, among others. In 2015 I co-founded [ALTERLAB](#), an immersive media company with a strong focus in R&D. In my last project with ALTERLAB I developed a volumetric capture system for virtual reality.

FEATURED PROJECTS



2018 | [EL BEAT](#) [Prototype] | **Virtual reality experience**

Winner of the Proimágenes New Media Fund.

Roles: Technical direction, creative co-direction, programming, volumetric capture.



2015 | [Irruptio](#) | **Performance**

Performance exploring the conflict between man and machine.

Roles: Creative co-direction, brainwave interface programming, sound synthesis.

Hardware: *brainwave-interface*, Bio-tense stimulator, Arduino.

Software: OpenFrameworks, PureData

OTHER
PROJECTS



2014 | [Con otro](#) | Interactive installation

Interactive installation for the second Biennial of Muralism and Public Art in Cali, Colombia.

Roles: Solo work. Concept, coordination, programming.

Software: Processing

Hardware: MS Kinect



2014 | [Tuza](#) | International Symposium of Electronic Arts (ISEA)

[Collaboration] Sound installation showcasing the archaeological findings of *Tuza* instruments.

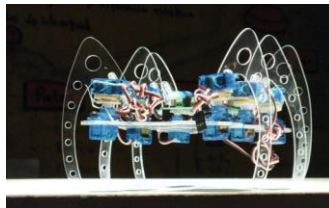
Roles: Sound synthesis, interaction design.



2016 | Taganga VR | 360 video documentary

360 Video documentary about the struggle of fishermen in Taganga bay (Magdalena, Colombia).

Roles: Concept, 360 camera operation.



2013 | Symbiosis | Art installation

Art installation exploring a possible symbiotic relationship between robots and plants.

Roles: Electronics, robot programming, computer vision.

Software: OpenFrameworks, Arduino.

Hardware: Raspberry-Pi, Arduino.

RECENT WORK
EXPERIENCE

2016 – 2018 | Head of R&D | [ALTERLAB](#)

Roles: lead the technical team at Alterlab. The team is in charge of building hardware and software solutions for VR. Namely:

- 3D printing of 360 camera rigs
- Programming real-time monitoring applications for VR
- Programming VR applications
- Camera modification for VR applications

2016 | Curriculum designer and instructor | Colombian National Department of Statistics

Roles: curriculum designer and instructor for the course "Introduction to data visualization".

2011 – 2014 | Associate professor | San Buenaventura University – Cali (Multimedia engineering program)

Courses: Creative Coding, Digital Audio, Interactive audio applications, Audio Processing, Physical computing.

STUDIES

2010 | Master in Information, Communication and Audiovisual Technologies, Pompeu Fabra University, Barcelona, Spain.

Granted a scholarship from Fundacion Carolina.

Research Group: [Music Technology Group](#).

2009 | Bachelor in Physics | National University of Colombia

HARDWARE



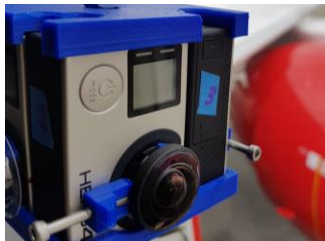
2018 | Asset-tracker – Monitoring station

Telemetry system for long-term asset-tracking
Electronics: Particle Photon, LORA modules.
3D printing with acrylic.



2018 | Volumetric capture rig

Volumetric capture hardware for VR and AR.
Tracking: HTC-Vive controllers
Camera: MS Kinect V2
Materials: 3d printing and aluminium.



2017 | Video rig for live-action 360.

Rig with ultra-wide fisheye lenses for 360 video capture.
Material: 3D print in PLA.

SOFTWARE

2018 | Creative Pointcloud Toolset

Volumetric capture application for VR and AR.

<https://vimeo.com/238706063>

2013 | VBOT: Computer vision application for interactive applications

<https://github.com/sergiobd/visionSymbiosis>,

<https://vimeo.com/88332718>

2013 | ARNetwork: Network visualizer

<https://vimeo.com/88332717>

CONFERENCES

Agosto 2017 | Volumetric capture in Virtual Reality

Event: 5th Creative encounter of Science and Art

Location: Mutante Lab

Octubre 2016 | *Virtual reality ¿A promising technology or not?*

Event: Expin MediaLab Conference Cycle

Venue: Universidad Autónoma de Occidente

PROGRAMMING
LANGUAGES
/ SOFTWARE

MATLAB, R, C++, OpenFrameworks, PureData – MAX/MSP, Processing. JUCE Libraries. Unity3D.

LANGUAGES

English (expert), French (expert).

AREAS OF
INTEREST

Interactive audio applications, virtual reality, digital art, data visualization.

REFERENCES

- Ralph Andrzejak
PhD, Associate profesor at Universidad Pompeu Fabra, Barcelona.
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