Marco Comunità

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PUBLICATIONS

Comunità, M., et al. **"PlugSonic: a web-and mobile-based platform for binaural audio and sonic narratives."** *arXiv preprint arXiv:2008.04638*, 2020.

Comunità, M. and Picinali, L. **"Estimating Ear Canal Volume through Electrical Impedance Measurements from In-Ear Headphones — Initial Results"** - *Audio Engineering Society Conference: 2019 AES International Conference on Headphone Technology. Audio Engineering Society, 2019.*

Comunità, M., Gerino, A., Lim, V., Picinali, L. **"Web-based binaural audio and sonic narratives for cultural heritage"** - *Audio Engineering Society Conference: 2019 AES International Conference on Immersive and Interactive Audio. Audio Engineering Society, 2019*

EDUCATION

Queen Mary University of London | MSc SOUND and MUSIC COMPUTING - Merit   Sep '15 - Sep '17

Thesis: ''Influence of Placement on Loudspeakers' Electrical Impedance'' – Distinction
DSP _ Digital Audio Effects _ Music Analysis and Synthesis _ Machine Learning _ Real-Time DSP _ Sound Recording and Production Techniques _ Music Perception and Cognition _ Music and Speech Modelling

Sapienza University of Rome | MEng ELECTRONICS ENGINEERING

Thesis: ''Distance Perception in Virtual Audio Display'' – Spatial Audio - developed for Technicolor at ISPAMM, Sapienza University.
Analogue Electronics _ IC design _ Discrete Time Circuits _ RF Electronics _ VLSI Systems _ Telecommunications _ EM Fields _ Microwaves _ Quantum Mechanics

Sapienza University of Rome | BEng COMPUTER ENGINEERING

Calculus _ Linear Algebra _ Statistics _ Physics _ Chemistry _ Control Systems _ Programming _ Algorithms and Data Structures _ Databases _ SW Engineering _ Theoretical Computer Science _ Operating Systems _ Artificial Intelligence _ Networks _ Electronics _ Telecommunications _ Processors Architecture and Design

WORK EXPERIENCE

Imperial College London | RESEARCH ASSISTANT
Nov '17 – Present Day

RA in 3D Audio at the Dyson School of Design Engineering. Web Developer for the Pluggy EU project. Teaching Assistant.

Blackstar Amplification Ltd. | PROJECT and DESIGN ENGINEER

Mar '14 – Nov '17

Project and Design Engineer for one of the leading guitar amplifiers companies in the MI industry.

- Design _ Valves, solid state and ICs | Active and passive filters | Preamps | Power amps | Schematic and PCB layout | Switching and logic circuits |Mass production and custom designs | Critical listening
- Project Management _ Economic and technical feasibility | Competitors' analysis | Resources management to achieve development milestones on time | Components sourcing | Technical specifications and other supporting documentation | Collaboration with suppliers and OEMs to achieve performance, cost and time targets | Interaction and report to R&D manager and directors | Coordinating functions and interfacing with other departments: mechanical, graphics and marketing, sales, service, operations, financial, supply chain
- Testing _ Conduct and lead tests at each build milestone: electronic, sonic, EMC and safety, endurance, heat, rattling test
- Production _ Documentation | Test procedures | Quality assessment | Support prototype assembly events | Travel to Far East for pre- and mass production setup with OEMs | Regular OEMs support | Technical investigations and RFC for most projects in the analogue and digital teams
- Research _ Electronics | Acoustics | Collaboration with digital team: training, analysis, modelling of analogue linear and non-linear blocks | Development of circuits and tools to reduce the time to market

Mad Hatter Stompboxes | FOUNDER – OWNER – DESIGN ENGINEER   Jan '09 – Dec '14

Founder and owner of a business of design and manufacturing of high quality analogue guitar effects, which has grown continuously in dimension and reputation during its whole lifespan.

- Full product design _ Concept | Electronics | Graphics | Packaging | Website
- Assembly and Testing
- Supply Management
- Financial Management
- Customer Support

Hari the Drop | GUITARIST – COMPOSER – AUDIO ENGINEER   2011 – 2013

During summer 2011 I have recorded my band's first album, which has been released in April 2012.

- Recording _ Voice | Guitars | Bass | Drums
- Mixing and Post-processing
- Publishing and Graphic Design

Live _ more than 100 gigs

Sincro Consulting S.p.A | WEB DESIGNER – TECHNICAL ASSISTANT   2005 – 2007

Development and technical assistance for the website of the main Italian newspaper "La Repubblica" working in team with technical and editorial staff in an environment in which rapidity and reactivity are essential

SKILLS

C++ | Python | JavaScript | Assembler | MATLAB | VHDL | Java | JavaCC | SQL

Cadstar PCB design | Spice | Audio Precision Analysers | Eagle CAD | Cadence Virtuoso | ModelSim

Recording | ProTools | Cubase | Logic Pro X

Photoshop | Illustrator | HTML | CSS | Web Design | Microsoft Office | MacOS | Windows | Unix

LANGUAGES

Italian _ Native

English _ Fluent (IELS Score 7.5 / CEFR Level C1)

INTERESTS / HOBBIES

Guitar | Swimming | Cycling | Handball | Volleyball | Books | Cinema | Cooking | Travel