MiBTec

Who We Are

Since 2018, MiBTec aims to develop scientific and applied research in the field of human factors and human interaction with Virtual Reality, Augmented Reality and Mixed Reality.

The Center hosts the italian biggest infrastructures of their kind - **interactive CAVEs**, **haptic instruments**, **immersive virtual environments** and **VR headsets**.

Mind and Behavior Technological center

Why
Choose Us

> To generate research or business solutions centered on human experience in virtual environments.

> To boost business ideas in the field of work, learning, sustainable and healthy behaviour, neurosciences and marketing.

"We develop research applied to the improvement of people's quality of life"

Our
Services

Studies validation

We validate studies with augmented, virtual or mixed reality systems with the support of scientific methodologies.

Research and Development (R&D)

Studying human behavior, emotions, individual or social habits through simulations or virtual environments.

Developer and Startupper

We help to develop business projects supported by knowledge on human factors.

Rental of VR equipment

Rent a CAVE, driving simulator, haptic system or laboratory fully equipped.

Contact
Us

Website:
www.mibtec.it

Email:
mibtec@unimib.it

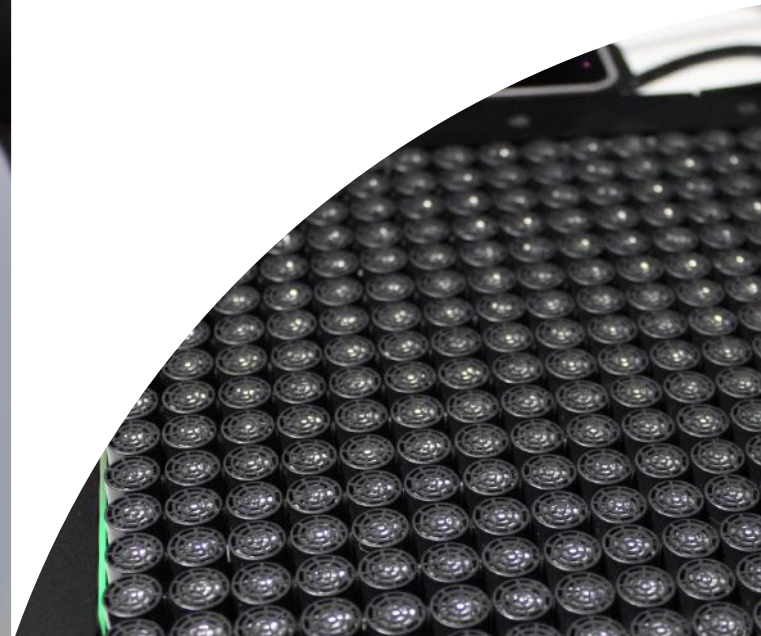**Address**:
Piazza dell'Ateneo Nuovo 1 - 20126 MILANO

Our
Facilities

With a total available space of 200 m2 divided into 3 laboratories and distributed in different university structures, the infrastructure available to MiBTec represents a unique reality in the Italian university landscape.

"New Infrastructures,
New Technologies,
New possibilities"

XR-READY DESKTOPS

HP desktops of the OMEN line provide the adequate computational power for creating and running complex 3D content, such as VR environments and experiences.

XR-READY NOTEBOOKS

The notebooks of the ASUS ROG line can deliver the power needed to sustain the execution of complex tasks. When coupled with a portable VR head-mounted display, it allows advanced data collection also outside the typical laboratory environment.

AR-READY TABLETS

Many tablets now integrate dedicated hardware for supporting the execution of AR applications which can take advantage of the seamless user-experience provided by the touchscreen.

ARDUINO HARDWARE

Arduino UNO is a low-cost, flexible, and easy-to-use programmable open-source microcontroller board that can be integrated into a variety of electronic projects.

BIOPAC (EEG, EDA, HR)

BIOPAC hardware platforms provide researchers with world-class, powerful, and flexible solutions for data acquisition and automated analysis of physiological parameters: as electrodermal activity, EEG signals, EMG activity and more.

CAVE SYSTEM

CAVE Automatic Virtual Environment is a projection-based VR display: a room-sized immersive 3D visualization system that allows users to collaboratively examine and manipulate complex 3D models with natural interaction and human 1 to 1 scale.

HTC VIVE PRO 2

The HTC Vive Pro 2 has many quality of life improvements (i.e., 5k resolution display, headband) which enable the fruition of VR experiences also for long periods of time without any kind of discomfort.

PIMAX 8K

The very high-resolution ultrawide screen of the Pimax 8K makes it the perfect device for conducting advanced research on the visual system in VR.

VARJO VR-3

The Varjo VR-3 is the most advanced VR headset currently (2022) available in the market. The display provides a human-eye resolution within a wide field of view. Moreover, the built-in sensors allow the collection of a wide range of behavioral data.

META QUEST 2

The Meta Quest 2 is one of the most versatile and wide-known VR headsets in the market. When tethered to a VR-ready PC, it can deliver complex VR experiences , but can also be used as a stand-alone and portable device.

HTC VIVE FOCUS 3

The HTC Vive Focus 3 is one of the most advanced enterprise-oriented stand alone VR headset. It is characterized by a 5k resolution, a powerful hand-tracking system and it is suitable for prolonged VR sessions (i.e., education and training).

PICO NEO 3 PRO EYE

The PICO Neo 3 Pro Eye combines the versatility of a stand-alone VR headset with the collection of behavioral data in the form of eye-tracking measures (i.e., ocular movements and fixations).

MICROSOFT HOLOLENS 2

The Microsoft Hololens 2 is the current standard for what concerns MR applications. It supports advanced environmental 3D scanning. It can provide an adequate field of view and can support a wider range of gestures for interacting with virtual objects.

INSTA360 PRO 2

A professional 360 camera to capture dynamic, stabilized, 3D footage that's ready to watch on a VR headset. The Insta360 One comes fitted with two powerful antenna, one of which allows the camera to transmit preview video over 300m at 30fps.

INSTA 360 ONE RS 1-INCH

The 1-Inch 360 Edition is the first 360 camera from Insta360 with dual 1-inch sensors and the first 360 camera co-engineered with Leica. The 1-Inch 360 Lens drastically improves low light performance and takes 360 image quality to new heights.
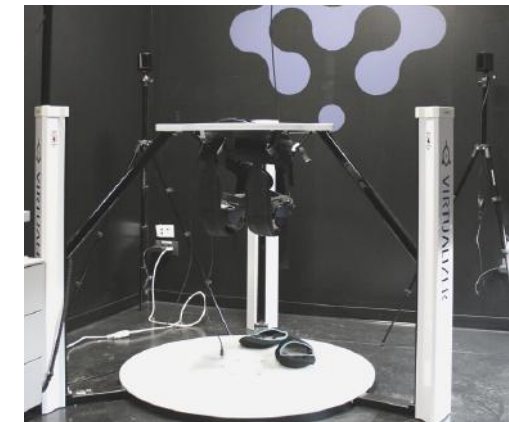

TESLASUIT

Is a human-to-digital interface designed in the form of a full-body AR/VR suit. Three integrated systems include haptics, motion capture, and biometry to provide realistic immersion and accelerate mastery.

ULTRALEAP STRATOS EXPLORE

Built for research and development: STRATOS Explore tracks users' hands using the world-leading Leap Motion Controller, and projects tactile effects onto them using ultrasound.
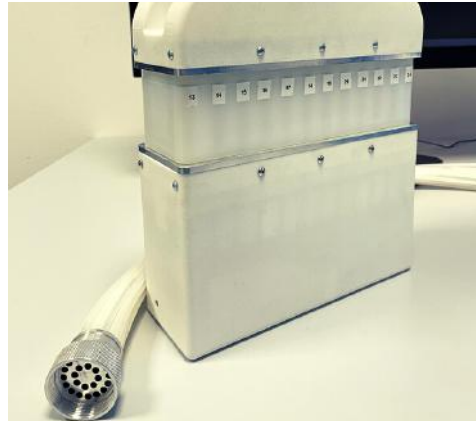

CYBERITH VIRTUALIZER

The Virtualizer Research & Development Kit is an effective product to tackle VR's locomotion problem. The tried and trusted simulator precisely tracks the user's movements, allows for a high degree of freedom of movement.

3D SYSTEMS TOUCH X

3D Systems haptic devices are used in every industry that requires accurate organic designs, using the sense of touch to build 3D models faster and with precision. This haptic device delivers optimal stiffness and a high exertable force to assist with the process of design and production.

O'WIDGETS SCENT DELIVERY SYSTEM

O'Widgets digital smell technology is realised across both software and hardware – creating a twin-system that provides full control over the power of smell. From choosing the scents and their combinations to adjusting the directionality and the intensity.

CUSTOM DRIVING SIMULATOR

Advanced driving simulators today are used by engineers and researchers in vehicle design, intelligent highway design, and human factors studies such as driver behaviors under the influence of drugs, alcohol, and severe weather conditions.

SUBPAC

SUBPAC is a patented tactile audio platform that combines hardware, software and advanced materials to deliver deeply immersive bass on the back of the user. Three levels of immersion are available: haptics, interoception and bone conduction.

PAIN STIMULATOR

Medoc's TSA2 offers thermal stimulation in the full range from sensation to pain, in heat and cold, using one or two thermodes simultaneously. This instrument allows multiple opportunities in research: pain research, clinical use and clinical trials.

NOVA HAPTIC GLOVE

Nova Haptics Glove rappresents the new sense in VR for enterprise, the most practical XR glove on the market, that offers combination of force – and vibrotactile feedback, wireless compact design and successful enterprise applications.

ARTEC EVA 3D SCANNER

This structured-light 3D scanner is the ideal choice for making quick, textured, and accurate 3D models of medium-sized objects such as a human bust, an alloy wheel, or a motorcycle exhaust system. It scans quickly, capturing precise measurements in high resolution. Light, fast, and versatile, Eva is our most popular scanner and a market leader in handheld 3D scanners. Based on safe-to-use structured-light scanning technology, it is an excellent all-around solution for capturing objects of almost any kind, including objects with black and shiny surfaces.

ULTIMAKER S5 3D PRINTER

Utimaker S5 3D printer guarantees a reliable 3D printing at scale. It has composite ready dual extrusion, 330 x 240 x 300 mm build volume, advanced auto bed leveling and compatibility with over 200 materials. Engineered for printing prototypes, manufacturing aids and end-use parts.

www.mibtec.it

BEYOND THE HUMAN MIND

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