UPV innovation

13-15
february
2024

eMobility World Congress

Contents

UPV innovation

innovacion.upv.es

0.1 About us

The UPV is recognised as a university that contributes to the innovation of companies and other entities in our society. To this end, the institution trains people with an innovative and entrepreneurial spirit in its teaching centres and generates knowledge and technology that it transfers to society and the socio-economic environment from its research units.

To make it easier for this contribution to innovation to reach society, the UPV-Innovation Knowledge Transfer Office has been set up, which has several specialised units that promote and channel the relationship with companies and institutions. **(Next pages)**

On the other hand, the Unit for Business Orientation in Innovation (UNOI) of the Valencian Business Confederation collaborates with the UPV units in fostering the relationship between the University and Valencian companies. This unit is promoted by the Social Council of the UPV.

The coordination of these units is based on the following principles:

- **Generate synergies** between the UPV units involved in the relationship with companies.
- **Establish external collaborations** from the business environment.
- **Generate interaction** between research groups as a source of innovation opportunities.
- **Dialogue** with the Research Structures to guide their activity for their benefit.

0.2 UPV Services for innovation

Talent Recruiting

Human resources at Bachelor, Master and Doctoral level in engineering, business and arts.

Staff Training

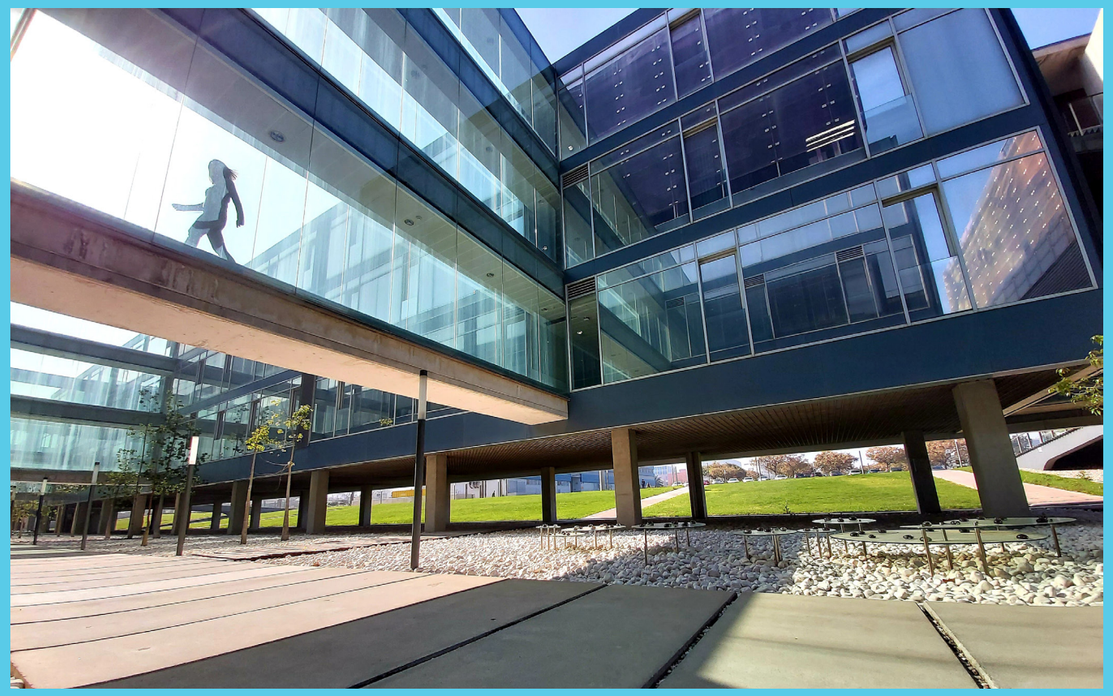
Updating and specialization of technical and research company staff.

Research and technology

R&D projects, technical consultancy, patents, software and other UPV R&D results for new company products and processes.

Investment opportunities (SPIN-OFF and START-UP)

Opportunities for business diversification and investment in knowledge-based companies.



UNIVERSITAT POLITÈCNICA DE VALÈNCIA

i2T investigación innovación transferencia

Promotion of university and business sector relationship
We promote the connection and relationship between the UPV and companies and other institutions seeking R & D solutions.

Intellectual property
We protect the knowledge and results coming from UPV research through patents, copyright and trade secrets.

R & D solutions
We facilitate access to UPV knowledge to contribute to address innovation and technology challenges and requests.

Technology transfer
We draft and negotiate patent and software license agreements, confidentiality and material transfer agreements as well as other documents linked to the transfer of UPV knowledge.

Office for the Promotion of Research, Innovation and Technology Transfer

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04. IdeasUPV

We are the start of the entrepreneurial dream.
We help turn ideas into reality through innovation.

IDEASUPV

Elevator Pitch

IDEASUPV is the entrepreneurship area of the Universitat Politècnica de València that, since 1992, supports and encourages the entrepreneurial initiatives of the members of the UPV Community. The area has helped the creation and development of nearly a thousand innovative companies that have generated a great impact on society. In addition, more than 200 startups have been incubated and accelerated in the StartUPV university ecosystem.

The mission of IDEASUPV is to promote and develop the entrepreneurial culture at the UPV, raise awareness and energize the university community in the creation and support of new companies, and support the creation and development of innovative and technology-based companies in the Valencian Community, mainly.

Services

1. Free mentorship for startups and spinoffs
2. Specific trainings for entrepreneurs
3. StartUPV: Business incubation and acceleration program
4. Contact with investors
5. Awards for companies
6. Mobility grants

Contact

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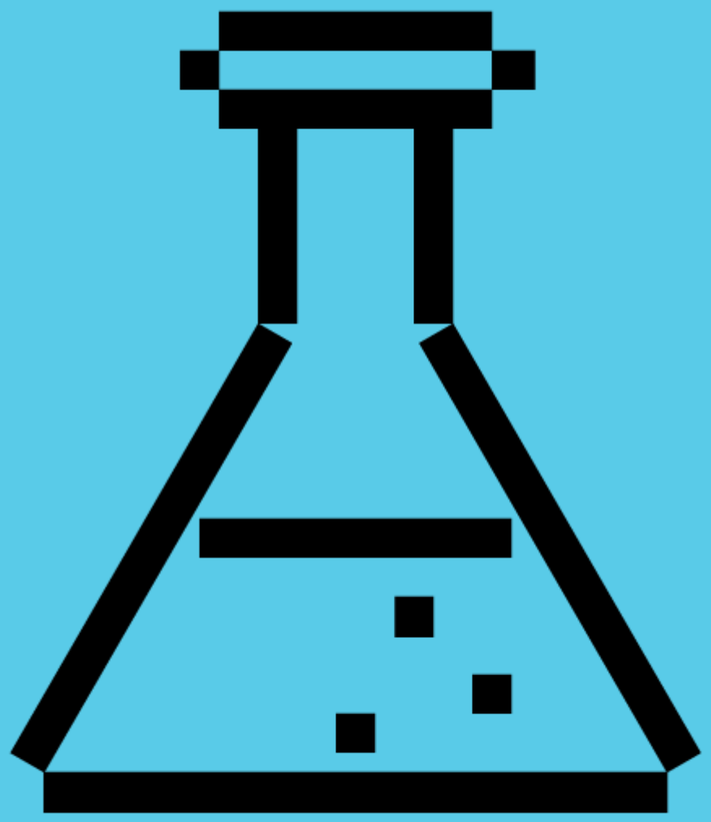
Web: ideas.upv.es
Instagram: @ideas_upv
X: @IDEASUPV
Linkedin:IDEAS UPV
Facebook: IDEAS UPV

Corporate video



1. Research Structures

1.1 ITACA

Institute of Information and Communication Technologies

Elevator Pitch

The ITACA Institute has as its mission the improvement of our society through the transfer and application of knowledge from research in the field of Information and Communications Technology (ICT). Two areas of the Institute are particularly focused on the field of mobility. The Air Navigation Systems Area (SNA) focuses on the development of surveillance and navigation systems and procedures based on them, as well as performance monitoring procedures and tools for performance-based CNS, both for manned and unmanned aircraft. The Traffic Control Systems Area (SCT) develops its activity within the field of city digitalization (Smart city) and, specifically, in the control of personal movility vehicles (PMV) such as e-scooters and bikes with the consequences that it is having in terms of accidents and compliance with the legislation, its integration with urban traffic planning (traffic lights, turns), and the opportunities that are generated around this solution. In fact, this area is launching a spin-off that will produce and distribute patented technology for PMV characterization.

Services

1. SNA: U-TraC (U-space platform aimed at drone operators to provide safe and efficient use of the airspsace), BB-Planner (software suite that generates a wide variety of realistic trajectories considering different types of UAS and missions, CsPM (tool that monitors communication and surveillance systems during drone operations and raises alerts when the performance is degraded), UAS Encounter Generator (3D simulator that runs randomized trajectories in a pre-defined scenario and computes the number of separation events), advanced tracking for highly maneuverable aircraft.
2. SCT: Traffic control, traffic quantification, security system, minimum invasive traffic sensoring, speed monitoring, vehicle counting, aggregated micromobility statistics.

Contact

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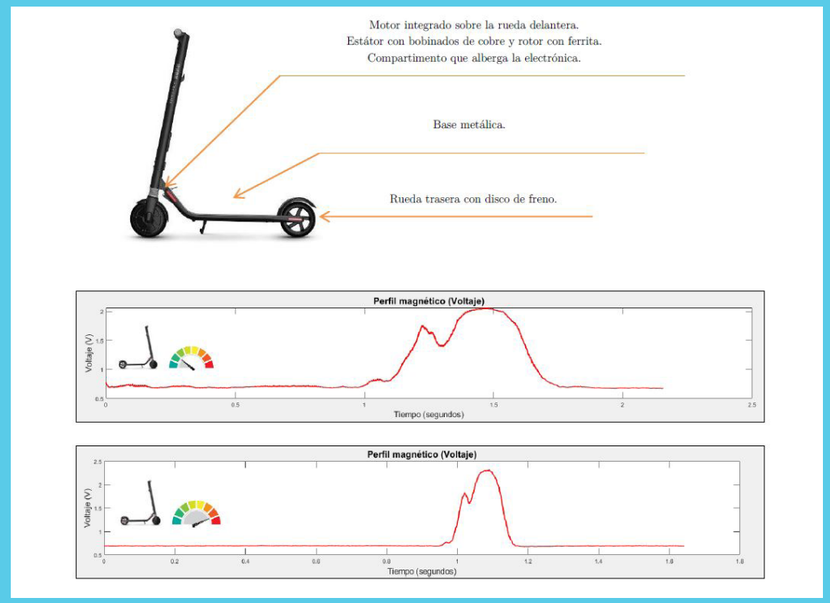
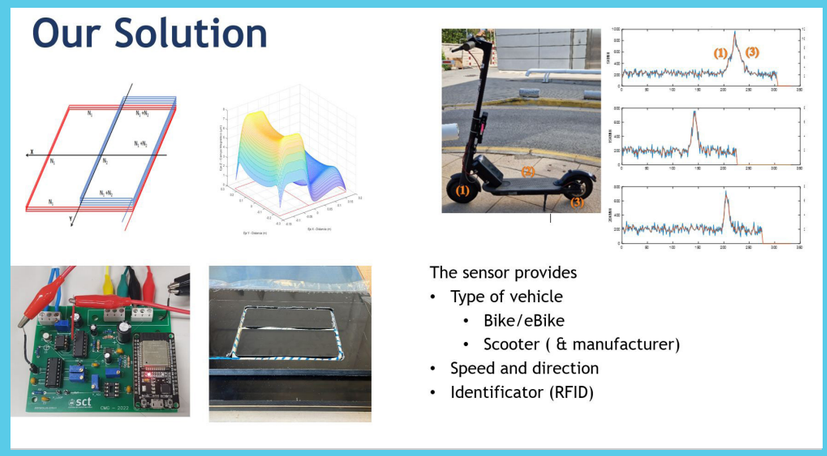
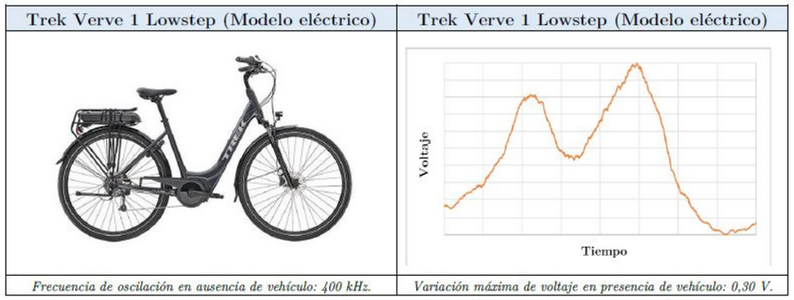
Web: itaca.upv.es







Corporate video

1.2 iTEAM

Photonic sensoring for electrical batteries monitoring

iTEAM
Instituto de Telecomunicaciones y Aplicaciones Multimedia

Elevator Pitch

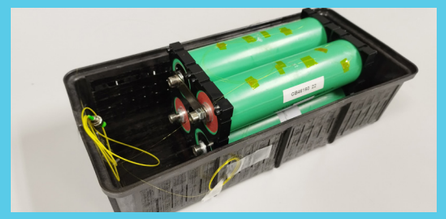
Research and development in the field of connected autonomous vehicles, remote driving, fleet management/coordination, mobile robotics, ADAS (Advanced Driver Assistance Systems), driving assistance systems based on radio signals and 3D acoustics and photonic sensoring for batteries monitoring

Services

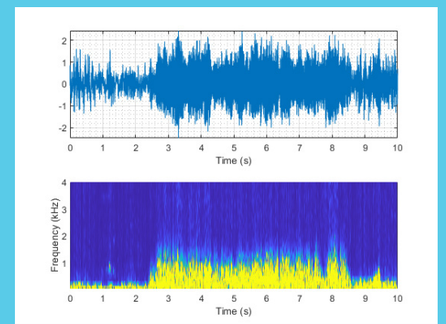
1. Research and development in the field of connected autonomous vehicles
2. Remote driving
3. Fleet management/coordination
4. Mobile robotics
5. ADAS (Advanced Driver Assistance Systems)
6. Driving assistance systems based on radio signals and 3D acoustics
7. Photonic sensoring for batteries monitoring

Contact

Web: iteam.es



5G underwater drone demo at the MWC 2022.



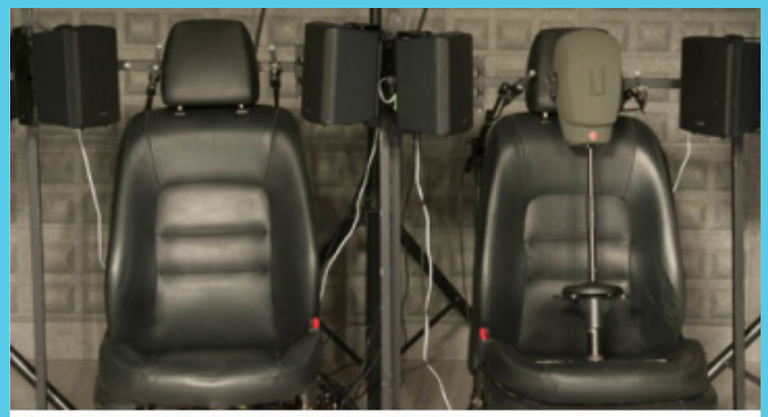
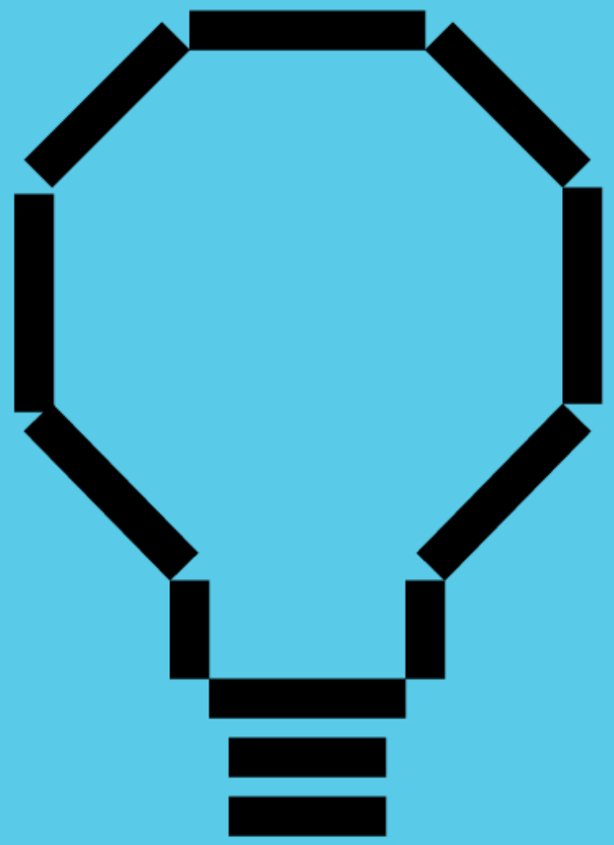


Figure 2. Car seats with transducers.

Corporate video



2. Patents

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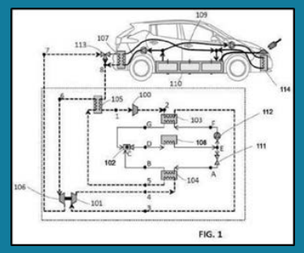
PATENT PORTFOLIO

Cooling system for ultra-fast battery charging for hybrid or electric thrusters

Recharging batteries requires the process to remain always under strictly controlled temperaturas. The system reaches -125ºC at the outlet of the turbine it is fitted on. To count with enough termal drop in order to be always ready to initiate the battery fast charging process.

The system uses ambient air as the working fluid to cool a liquid coolant circulating through a refrigeration circuit for the vehicle's batteries and electronic components and / or a supercharger.

It uses a semi-closed inverse Brayton cycle with the stages of: compression, expansion, cooling and regeneration.



Scheme proposed system

TECHNOLOGY

The system enables recharging times for batteries in electric or hybrid propulsion systems to be shortened, without penalizing their useful life.

Compression and expansion stages are carried out through turbomachines that provide high power and low thermal and mechanical inertia. The cooling and regeneration stages employ heat exchangers (plate, shell and tube, or cross-flow). Compression is carried out in stages, including for internal cooling a closed ejector cycle with refrigerants like ammonia or carbon dioxide. At the entrance to the first semi-closed stage, a filter drier can be provided to reduce humidity in the air.

The system can include, between the coolers, an ejection cycle (for improved efficiency) using a refrigerant fluid with low global warming potential, a condenser for the refrigerant gas-liquid phase change and a flow divider designed to split the air stream towards a pump (primary flow) and a lamination valve (secondary flow) respectively.

After the compressors and coolers, the air passes through a regenerator (heat exchanger), which lowers its temperature, and reaches the turbine where its temperature and pressure are reduced. Through a heat

IPR

☑ Patent Pending

☐ Patent Awarded

SPTO: [Tabla]
Priority: [Tabla]

[Otras solicitudes de IPR (PCT, fases)]

State of the Technology

☐ Idea

☐ R+D

☑ Laboratory Prototype

☐ Industrial Prototype

☐ Production

Test room with operational demonstrator (TRL4).

Consortium established with a work plan to achieve TRL6-TRL7 (prototype in relevant-real environment) by 2022.

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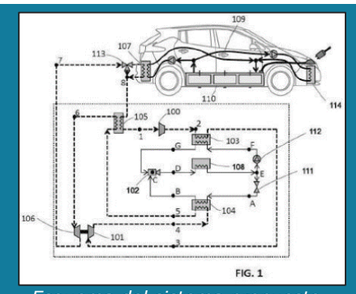
OFERTA TECNOLÓGICA

Sistema de refrigeración para carga ultrarrápida de baterías de propulsores híbridos o eléctricos

Para optimizar el rendimiento de una batería, se requiere que su recarga se realice con un rango de temperaturas óptimo. Con este sistema, se alcanza los -125ºC a la salida de la turbina que equipa con el objetivo de disponer siempre de suficiente salto térmico para acometer instantáneamente el proceso de carga ultrarrápido.

El sistema utiliza aire ambiente como fluido de trabajo para enfriar un líquido refrigerante que circula por un circuito de refrigeración de las baterías y componentes electrónicos del vehículo y/o de un supercargador.



Esquema del sistema propuesto

PROBLEMA QUE RESUELVE LA TECNOLOGÍA

El rendimiento de una batería depende de que su temperatura de operación se mantenga en un rango óptimo, evitando que se caliente demasiado cuando está alimentando el sistema de tracción o cuando se está recargando, sobre todo en estaciones de recarga rápida. En el contexto actual de impulso de la descarbonización del transporte, el sistema de gestión térmica de la batería se ha convertido en uno de los ejes de desarrollo para fabricantes y proveedores que buscan ofrecer la máxima autonomía posible junto con una velocidad de recarga que haga asumibles los tiempos de espera.

Con esta tecnología se resuelve el problema de generación del calor durante la carga rápida, utilizando un ciclo hibrido alineado con los objetivos de descarbonización.

TECNOLOGÍA

El sistema permite acortar los tiempos de recarga de las baterías de sistemas propulsivos eléctricos o híbridos, sin penalizar su vida útil.

Emplea un ciclo Brayton inverso semicerrado con las etapas de: compresión, expansión, refrigeración y regeneración. Las etapas de compresión y expansión se realizan a través de turbomáquinas que aportan alta potencia y baja inercia térmica y mecánica.

IPR

☑ **Patente Solicitada**

☐ Patente Concedida

OEPM: P201931124
Prioridad: 18/12/2019

Las etapas de refrigeración y regeneración emplean intercambiadores de calor (de placas, de carcasa-tubo o de flujo cruzado). La de compresión se realiza por fases, incluyendo entre ellas un ciclo eyector cerrado de enfriamiento interno con refrigerantes como amoníaco o dióxido de carbono. A la entrada de la primera etapa (semicerrada) puede disponerse un filtro secador para reducir la humedad del aire.

El sistema puede comprender, entre los enfriadores, un ciclo de eyección (mejora de la eficiencia) que hace uso de un fluido refrigerante de bajo potencial de calentamiento atmosférico, y que incorpora un condensador para cambio de fase gas-líquido del refrigerante y un divisor de flujo destinado a dividir la

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PATENT PORTFOLIO

Personal Mobility Vehicles Monitor system and method

System and method for Monitor of Personal Mobility Vehicles in urban environments

The traffic and variety of Personal Mobility Vehicles (PMV) are growing in urban environments. Urban planning and law enforcement requires a better knowledge on the use of PMVs. This invention enhances the magnetic loops used to detect traffic of motorized vehicles and provides a new tool for the remote assessment of PMVs traffic.
This invention brings remarkable innovations: (1) A double magnetic loop for cost-reduction (2) a working resonance frequency 400-800 kHz (3) a low cost electronic circuits designed and tuned for PMV.
The system and method extracts valuable information for PMV monitoring: Type of Vehicle, speed and length, sense of circulation, and traffic density in the target area.
The system design is validated with prototypes and tested in laboratory setup with a variety of PMV.

PROBLEM SOLVED BY TECHNOLOGY

The variety and intense use of Personal Mobility Vehicles (PMV) are rapidly growing in cities and urban environments. This invention provides an improved monitoring beyond the state-of-the-art detectors.

TECHNOLOGY

The basic technologies in this invention are the magnetic loops and electronic circuits applied to detect vehicles. These technologies are well established for current traffic detectors for motorized vehicles (cars, motorbikes, buses, trucks) and are in use for a variety of parameters: presence, speed, sense of circulation and type of vehicle. Not in PMVs.
Current detector solutions are installed in single, double or dual loops configurations and with a typical size in the range of 1 or 2 meters, and with resonance working frequency of 100-200 kHz.
But these state of art solutions, when applied to Personal Mobility Vehicles (PMV), only detect presence
To overcome this limitation, the innovation of this invention has the following **characteristics:**

- Double magnetic loop with size less than 0.5 meters
- Resonance working frequency of 400-800 kHz

The system design is implemented with five **functional blocks:**

1) Double magnetic loop (interconnected with [2] and [3])
2) Oscillator circuit (interconnected with [1] and [3])
3) Phase-Locked Loop PLL circuit (interconnected with [1] and [2] and output to [4])
4) Conditioning circuit (input from [3] output to [5])

IPR

☑ **Patent Applied**
☐ Patent Granted

SPTO: P202031271
Priority: 2020/12/18

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OFERTA TECNOLÓGICA

Sistema de monitorización de Vehículos de Movilidad Personal

El tráfico y variedad de Vehículos de Movilidad Personal (VMP) crece en entornos urbanos. Su planificación y el cumplimiento de la ley requieren un mejor conocimiento del uso de los VMP. Este invento mejora los actuales detectores de espiras magnéticas usados para vehículos motorizados y aporta herramientas de análisis remoto del tráfico de VMP.
Innovaciones destacadas: (1) Espira de doble bucle con coste reducido (2) Frecuencia resonante de 400-800 kHz (3) circuitos electrónicos de bajo coste diseñados para VMP.
El sistema y el método extraen información valiosa de monitorización de VMP: Tipología de vehículo, velocidad y longitud, sentido de circulación y densidad de tráfico en el área objetivo.
El diseño se ha verificado y validado en laboratorio con prototipos y mediciones con varios VMP.

PROBLEMA QUE RESUELVE LA TECNOLOGÍA

La variedad y uso intenso de Vehículos de Movilidad Personal (VMP) crece rápidamente en ciudades y entornos urbanos. Este invento aporta una monitorización más allá de los detectores existentes.

TECNOLOGÍA

La tecnología base de esta invención son las espiras magnéticas y los circuitos electrónicos aplicados a detección de vehículos. Son tecnologías asentadas en detectores de trafico de vehículos motorizados (coches, motos, autobuses, camiones) con los que se usan para parámetros como: presencia, velocidad, sentido de circulación y tipo de vehículos. Pero aún no para VMP.

IPR

☑ **Patente Pendiente**
☐ Patente Concedida

SPTO: P202031271
Prioridad: 2020/12/18

Las soluciones actuales en detectores son de bucle simple, doble o dual, con un tamaño típico de 1 o 2 metros, y una frecuencia resonante de trabajo de 100-200 kHz.
Pero estas soluciones de hoy día, al aplicarlas a VMP solo detectan presencia. Esta invención motoriza.
Para superar esta limitación, la innovación de este invento tiene las **características** siguientes:

- Espira de doble bucle con tamaño menor de 0,5 metros
- Frecuencia resonante de trabajo de 400-800 kHz

El diseño del sistema se implementa con cinco **bloques funcionales**:

1) Doble bucle magnético (conectado con bloques [2] y [3])
2) Circuito oscilador (interconectado con [1] y [3])
3) Circuito de Lazo con bloqueo de Fase PLL (conectado con bloques [1] y [2] y salida a [4])
4) Circuito acondicionador (entrada desde [3] y salida a [4])
5) Circuito procesador de señales (entrada desde [4])

U-TOOL: Urban Intelligence

Tool to improve municipal services based on the activity of social networks.

TECHNOLOGY

U-tool is a tool that allows a quick analysis of the activity of a city through the participation of its inhabitants in social networks and facilitates decision-making for the improvement of various municipal services.

Its usefulness includes both the professional sphere -for example, it allows the analysis of urban planning- and the private sphere, facilitating the mobility of citizens and tourists who wish to explore the activity of a specific area in real time.

Unlike other tools that display heat maps, U-tool generates a contour map that indicates where people are moving, taking into account the attraction potential of points in the city. This is done using the social network Twitter, whose data is public. The tool extracts geo-positioned data from Twitter and uses it as an input source to calculate the gravitational potential at a set of points in the city. Using the values obtained, a matrix is generated that is used to draw the contour map. U-tool translates this data into an activity contour map and allows to obtain the gravitational potential, a measure that visually indicates and displays the city's hot spots.

In the public sphere, U-TOOL can be used to analyze concentrations of people and thus improve in real time municipal services such as transportation or traffic light control. Temporal analysis over time allows similar mobility patterns to be analyzed and assists in making mobility decisions in periods where activity is expected to be similar.

This application has been developed using Django, the most popular Python web environment.

Raw data begins to be collected by the application when a user creates a new "collection task" for a hashtag, a geographic area, or both. UTool will query a social network and the next stream of tweets will be filtered and stored in a distributed system based on HDFS and Parquet designed for massive storage scalability. The data is then ready to be processed with any of the available analytical tools, and this is done using efficient and parallel big data computing libraries such as Dask.

Finally, a user-friendly web frontend presents the calculation results to the user in a visual form.

Referencia: **S-054-2020 U-TOOL** Fecha de registro: **16/04/2020**

STAGE OF DEVELOPMENT (TRL)

LEVEL OF VALIDATION	1	2	3	4	5	6	7	8	9
	THEORETICAL		LABORATORY		RELEVANT ENVIRONMENT		OPERATIONAL ENVIRONMENT		

U-tool has been applied to the city of Valencia, although the tool is valid for any other city. The data has been integrated into the Fireware platform of the Valencia City Council and, in the future, will be included in its transparency and open data portal.

DESIRED COLLABORATION

You can request a free demo in order to obtain a license to apply the software in your city.

Contacto científico

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More technologies in:

U-TOOL: Inteligencia Urbana

Herramienta de mejora de servicios municipales a partir de la actividad de las redes sociales

TECNOLOGÍA

U-tool, es una herramienta que permite un rápido análisis de la actividad de una ciudad a través de la participación de sus habitantes en las redes sociales y facilita la toma de decisiones para la mejora de diversos servicios municipales.

Su utilidad comprende tanto el ámbito profesional -por ejemplo, permite analizar la planificación urbanística-, como el privado, facilitando la movilidad de ciudadanos y turistas que deseen explorar la actividad de una determinada zona concreta en tiempo real.

A diferencia de otras herramientas que muestran mapas de calor, U-tool genera un mapa de contorno que indica hacia dónde se desplaza la gente teniendo en cuenta el potencial de atracción de puntos de la ciudad. Para ello se utiliza la red social Twitter cuyos datos son públicos. La herramienta extrae datos geo-posicionados de Twitter y los utiliza como fuente de entrada para calcular el potencial gravitario en un conjunto de puntos de la ciudad. Utilizando los valores obtenidos, se genera una matriz que sirve para dibujar el mapa de contorno. U-tool traduce estos datos en un mapa de contorno de actividad y permite obtener el potencial gravitatorio, una medida que indica y muestra visualmente los puntos de atracción de la ciudad.

En el ámbito público, U-TOOL puede servir para analizar concentraciones de personas y, de este modo, mejorar en tiempo real servicios municipales como los transportes o el control de los semáforos. El análisis temporal a lo largo del tiempo permite analizar los patrones de movilidad similares y servir de ayuda a la hora de tomar decisiones sobre movilidad en periodos donde la actividad se prevé que sea parecida.

Esta aplicación se ha desarrollado utilizando Django, el entorno web más popular de Python.

Los datos en bruto comienzan a ser recogidos por la aplicación cuando un usuario crea una nueva "tarea de recopilación" para un hashtag, una zona geográfica, o ambos. UTool consultará una red social y el próximo flujo de tweets se filtrará y guardará en un sistema distribuido basado en HDFS y Parquet diseñado para una escalabilidad de almacenamiento masiva. A continuación, los datos están listos para ser procesados con cualquiera de las herramientas analíticas disponibles, y esto se realiza utilizando librerías de computación de big data eficientes y paralelas como Dask.

Por último, un frontend web fácil de usar presenta los resultados del cálculo al usuario de forma visual.

Referencia: **S-054-2020 U-TOOL** Fecha de registro: **16/04/2020**

GRADO DE DESARROLLO (TRL)

NIVEL DE VALIDACIÓN	1	2	3	4	5	6	7	8	9
	TEÓRICA		LABORATORIO		ENTORNO RELEVANTE		ENTORNO OPERACIONAL		

U-tool se ha aplicado a la ciudad de Valencia, aunque la herramienta es válida para cualquier otra ciudad. Los datos se han integrado en la plataforma Fireware del Ayuntamiento de Valencia y, en un futuro, se incluirán en su portal de transparencia y datos abiertos.

COLABORACIÓN DESEADA

Puede solicitar una demo gratuita con el fin de obtener una licencia para aplicar el software en su ciudad.

Contacto científico

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More technologies in:

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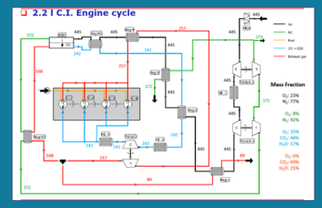
PATENT PORTFOLIO

Internal combustion engine with no harmful gas (NOx) or CO2 emissions

New generation hydrocarbon internal combustion engine, cost efficient, disruptive and self-transportable.

The technology, based on MIEC ceramic membranes (patented by ITQ), eliminates all contaminating gases, harmful to health (NOx), capturing and liquefying own and atmospheric CO2 so it can be stored and collected at petrol stations (potential negative CO2 emissions).

It complies with emission regulations planned for 2040.



Scheme of the motor cycle

TECHNOLOGY

An internal combustion engine, with high specific power and high efficiency, which uses two Brayton cycles: a first cycle that incorporates an MIEC membrane to separate O2 from the air so that the suctioned oxidizing stream has not any N2; a second cycle combined in a binary way with the first cycle and nested with a cycle selected from an Otto cycle and a Diesel cycle using oxy-combustion.

The first cycle delivers compressed O2 from the MIEC membrane to the second cycle. The second cycle transmits mechanical and thermal energy from the exhaust gases to the first cycle.

This technological integration prevents the emission of harmful gases (NOx) to the atmosphere by separating N2 in the MIEC membrane. It can be used in various ways, including but not limited to by way examples:

- Premixed or diffusion oxy combustion engine, with:
  - Either Zero (or low positive) tail pipe CO2 emissions.
  - or Negative tail pipe CO2 emissions: with a polymeric membrane or a molten carbonate-based membrane to separate CO2 from the air.

IPR

☑ Patent Pending
☐ Patent Awarded

SPTO: P201930285
Priority: [Tabla]

[Otras solicitudes de IPR (PCT, fases)]

State of the Technology

☐ Idea
☐ R+D
☑ Laboratory Prototype
☐ Industrial Prototype
☐ Production

Prototypes of the components have been developed (TRL4).
Prototype in real environment in 2022 (TLR7) with the necessary funding.
Potential spin-off with investors

UNIVERSITAT POLITÈCNICA DE VALÈNCIA

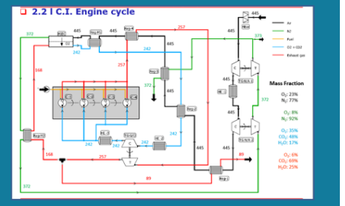
i2T

OFERTA TECNOLÓGICA

Motor de combustión interna sin emisión de gases nocivos para la salud (NOx) ni CO2

Motor de combustión interna de hidrocarburos de nueva generación, coste eficiente, disruptivo, auto transportable.

La tecnología empleada, basada en la utilización de membranas cerámicas MIEC (patentadas por el ITQ), elimina todos los gases contaminantes y nocivos para la salud (NOx), capturando el CO2 propio y atmosférico, licuándolo, siendo susceptible de almacenaje y recogida en las estaciones de servicio (potenciales emisiones negativas de CO2). Cumple la normativa sobre emisiones prevista para 2040.



Esquema del ciclo del motor

TECNOLOGÍA

Motor de combustión interna, de alta potencia específica y alta eficiencia, que emplea dos ciclos de Brayton: un primer ciclo que incorpora una membrana MIEC que separa el O2 del aire de manera que la corriente de oxidante (comburente) succionado está libre de N2; un segundo ciclo combinado de forma binaria con el primero y anidado con un ciclo seleccionado de un ciclo de Otto y un ciclo Diésel realizado mediante oxicombustión.

El primero proporciona al segundo O2 comprimido procedente de la membrana MIEC. El segundo transmite al primero energía mecánica así como energía térmica procedente de los gases de escape.

Esta integración tecnológica evita la emisión de gases nocivos para la salud (NOx) a la atmósfera por la separación de N2 en la membrana MIEC. Es susceptible de diversas realizaciones no limitativas, a modo de ejemplos:

- Motor de oxicombustión premezclada o por difusión, con emisiones operativas (por el tubo de escape) de CO2:
  - Positivas (muy bajas) o cero
  - Negativas: con membrana polimérica para separar CO2 del aire, o bien, con membrana basada en carbonatos fundidos para separar dicho CO2.

IPR

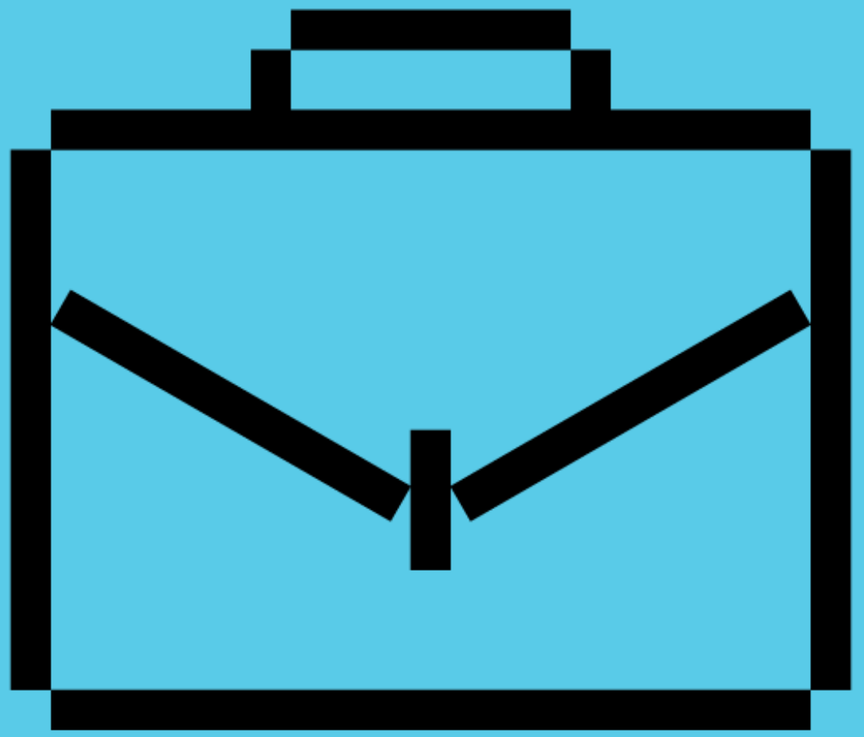
☑ Patente Solicitada
☐ Patente Concedida

OEPM: P201930285
Prioridad: 28/03/2019

Estado de la tecnología

☐ Idea
☐ I+D
☑ Prototipo de Laboratorio
☐ Prototipo Industrial
☐ Producción

Desarrollados los prototipos de los componentes (TRL4).
Prototipo en entorno real en 2022 (TRL7) con la financiación necesaria.



3. Startups & Spin-off

Corporate video

3.1 Urnovai

Connecting urban and business innovation

URNOVAI
Connecting Urban and Business innovation

Elevator Pitch

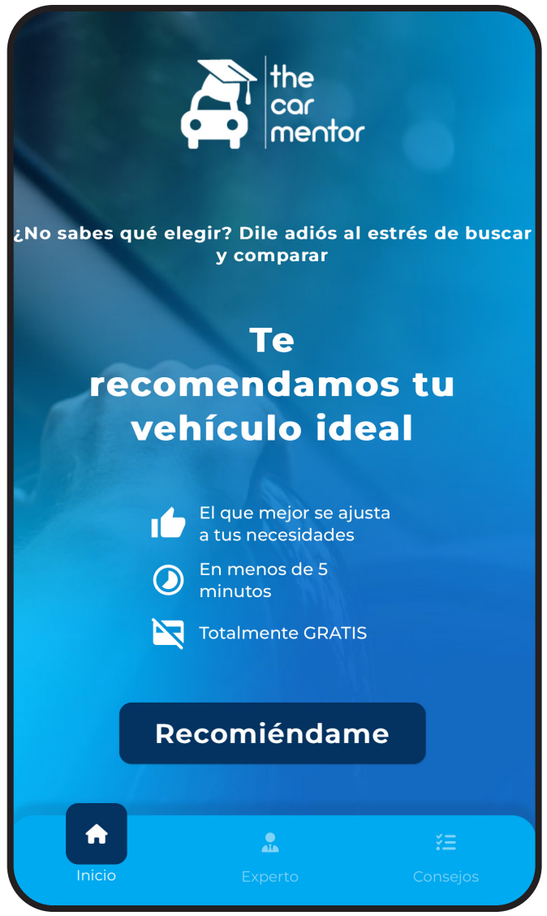
Specialised advice on innovation and sustainability projects for cities and companies. Thanks to a digital platform with Artificial Intelligence, we connect the real needs of administrations and other public entities with the disruptive solutions offered by companies, driving development and transformation on both sides.

Services

1. Urban and sustainable mobility plans.
2. Future of Mobility.
3. Mobility data management.

Contact

Mail: urnovai@outlook.com



Corporate video

30

3.2 The Car Mentor

Not sure what to choose? Say goodbye to the stress of searching and compare. We recommend your ideal vehicle.

the car mentor

Elevator Pitch

The Car Mentor is a private vehicle recommender that allows the user to find the vehicle available on the market that best fits his or her personal needs.

Services

1. Digital solutions
2. Vehicle marketing
3. Big Data
4. AI
5. Automotive
6. Micro-mobility

Contact

Mail: jaime@thecarmentor.com
Instagram, X: @thecarmentor_es
Linkedin: The Car Mentor

Corporate video

3.3 Parking Patín

Create Your "Parking Patín" Space

PARKING PATÍN

Elevator Pitch

Parking Patín is a recently created company dedicated to the design and manufacture of various models for the parking of electric scooters. We combine safety, functionality and aesthetics in each of our products and make use of the latest technology in locks, thus promoting the use of electric personal mobility vehicles in an organised and sustainable ecosystem.

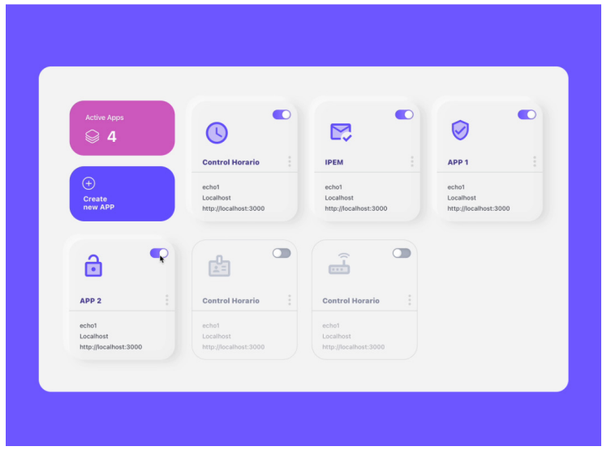
Services

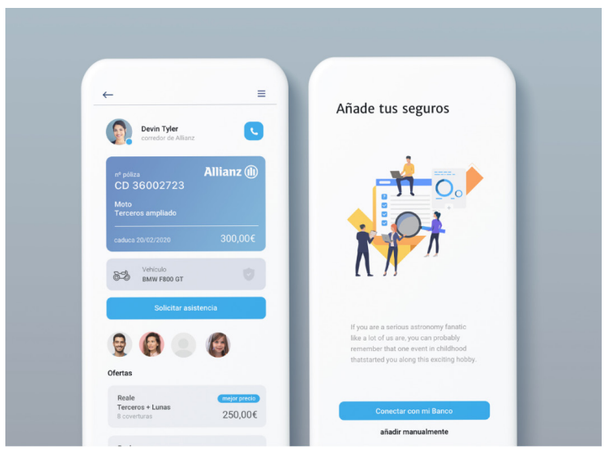
Furniture for parking
electric scooters

Contact

Web: parkingpatin.es
Instagram: @parkingpatin
Facebook, Linkedin: Parking Patín
Mail: info@parkingpatin.es

by **WonderBits**





Corporate video

3.4 WonderBits

We are here to solve all of your custom software and design needs

Elevator Pitch

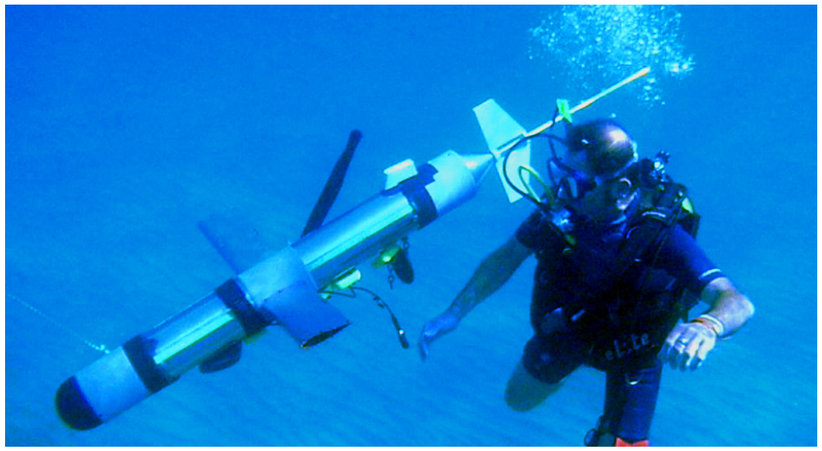
WonderBits provides full data coverage, from digitalization and data capture to data analytics and automation with Machine Learning and Artificial Intelligence, always putting a great focus on User Experience.

Services

Our WonderBI Mobility Analytics platform provides population mobility analysis with heat maps, traffic and emissions prediction through correlated and external data time series Machine Learning models.

Contact

Web: wonderbits.net
Linkedin: Wonder Bits
Mail: hello@wonderbits.net



Corporate video

3.5 Marinero B

We are a high tech company with engineering applied on all the stages of our products, from the design desk to the real world as a test lab.

marinerob
www.marinerob.com

Elevator Pitch

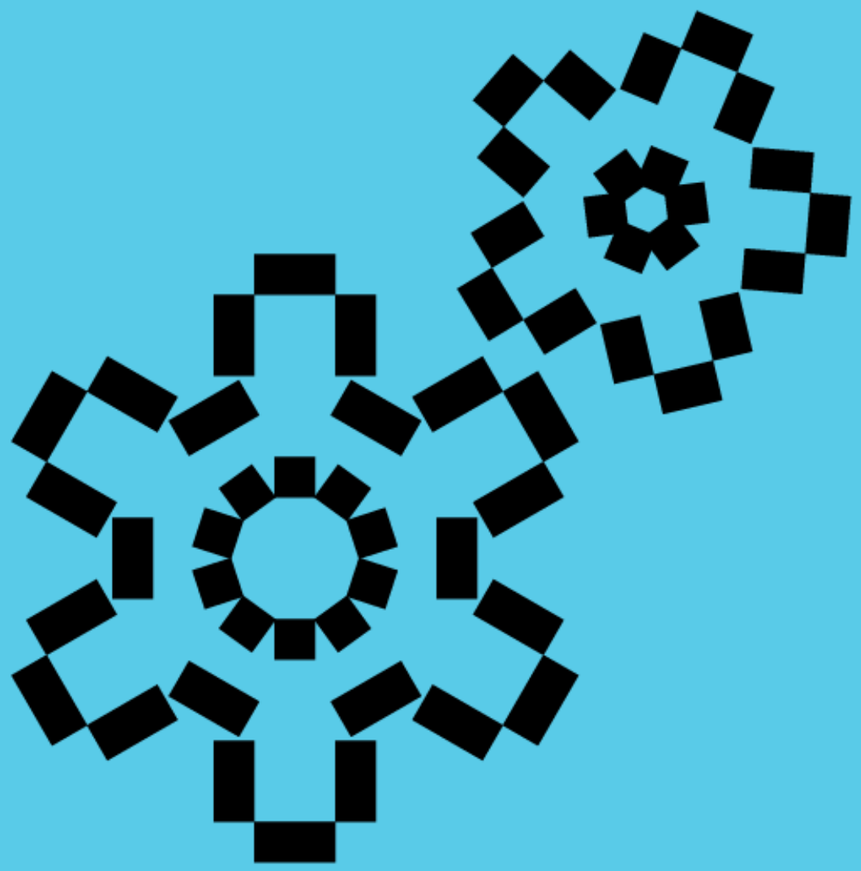
MARINEROB is a SpinOff created from the Polytechnic University of Valencia SPIN-UPV program in 2023. This recently founded company (MARINE ROBOTICS S.L. www.marinerob.com) is devoted to the development of innovative products and solutions for the marine environment. Among others their projects are related to engineering, R&D and application of advanced technological developments in particular sustainable autonomous vehicles boats and underwater vehicles both manned and unmanned. These two types of marine artifacts are intended to perform long term operations at sea in a wide vision of applications. In addition, the two types of vehicle concepts are designed for having the capability of performing cooperation in complex operations at the ocean. Among other some present applications in which the company is working are measuring marine physicochemical and biological parameters, validate innovative systems for the generation of alternative marine energy, the generation cycle and application of green hydrogen, autonomous navigation, and other advanced technology of application to the marine environment.

Services

1. R&D.
2. Marine autonomous vehicles: boats and underwater vehicles, marine clean energy systems, clean hidrogen propulsion for marine applications, full accesible boats for limited mobility persons.

Contact

Mail: info@marinerob.com
Web: marinerob.com
Linkedin: Javier Busquets Mataix



Design Factory is a UPV program where students create multidisciplinary groups to "learn by doing"

4. Generación espontánea - Design factory

4.1 Hyperloop UPV

Hyperloop technology presents a revolution in mobility that could change the way we live, work and travel.

HYPERLOOPUPV

Elevator Pitch

Hyperloop UPV is a team of 50 students from different fields of knowledge who are in charge of developing the transport of the future. Hyperloop is a means of transport that levitates inside a vacuum tube, reaching speeds of 1000 km/h in a sustainable way. Last season, our team was able to develop a fully functional vehicle, capable of levitating and moving frictionlessly inside our own vacuum tube autonomously.

Services

1. Electric mobility.
2. Innovation.

Contact

Mail: halbert@hyperloopupv.com
Web: hyperloopupv.com

Corporate video

4.2 Helios Race

We are building a sustainable future by committing ourselves to the creation of solar vehicles

Elevator Pitch

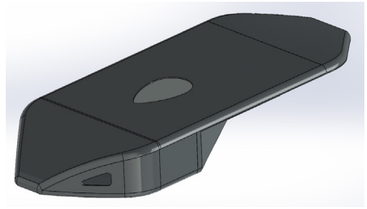
We are the Solar Racing team of the UPV. Our goal is the design and construction of a solar car to compete in Solar Racing races in the world. Solar Racing involves endurance competitions where solar cars race, for at least 24 hours, posing the challenge of designing vehicles capable of enduring the night period.

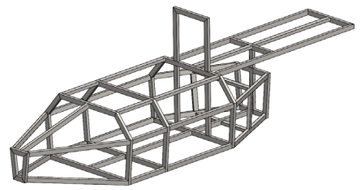
Services

Innovation in the mobility sector.

Contact

Mail: heliosraceupv@gmail.com
Instagram: @heliosraceupv





4.3 EPSA Moto-E

Escola Politècnica Superior d'Alcoi

Elevator Pitch

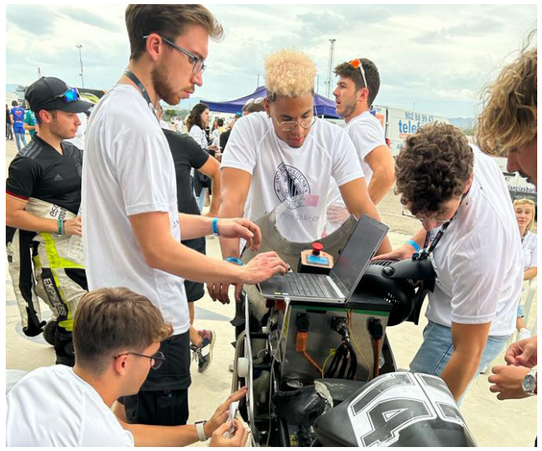
We’re a University team of the Polytechnic University of Valencia, at its campus in Alcoy. Formed by a group of students from various disciplines and majors, we share a passion for innovating in the design, development, and construction of electric motorcycles from scratch. From engineers to social media and logistics coordinators, each member contributes with their unique expertise to achieve our common goal in the International MotoStudent Competition.

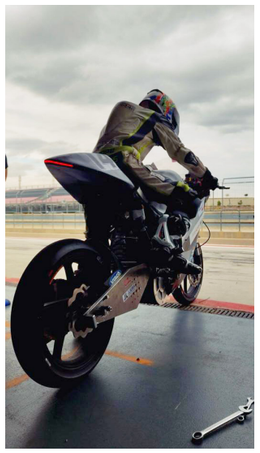
Services

We can offer insight into the competitive side of electric mobility, as well as insight into the development of a competitive prototype and how students nowadays take on the challenge of designing and making a prototype competing at the highest level of electrical motorsport at a international university level.

Contact

Mail: epsamotoe@gmail.com
Instagram, tiktok, linkedin:
@epsamotoe





Corporate video

4.4 FSUPV Team

Universitat Politècnica de València Formula Student Team

FSUPV TEAM
VALENCIA

Elevator Pitch

The FSUPV Team is formed by 45 students from the Polytechnic University of Valencia, whose purpose is to design, manufacture and compete with a hybrid-powertrain, Formula Student prototype in the most emblematic European circuits. This prototype is a conventionally driven race car, with the addition of a completely functional autonomous system.

Services

Our target is to develop a hybrid powertrain concept, on our path to electrification with a four-wheel drive, with 4 electric motors mounted directly on the wheels and a self-developec battery. During the last 3 years, our prototypes include a completely functional autonomous system; this concept is based on complex perception algorithms, velocity and position estimations, path definition and optimization, and self-actuation of the powertrain and steering of the race car.

Contact

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Web: fsupv2017.webs.upv.es
Instagram, X: @FSUPVteam
Linkedin, Facebook, Youtube: FSUPVteam

Corporate video