Carlos Raga Camilleri

Universitat Autònoma de Barcelona (UAB)
http://www.uab.cat/

Bilateral Meetings

- 02.03.2015 Monday (11.00h - 13.05h)
- 02.03.2015 Monday (13.05h - 15.10h)
- 02.03.2015 Monday (15.10h - 18.05h)
- 03.03.2015 Tuesday (9.00h - 11.05h)
- 03.03.2015 Tuesday (11.05h - 13.10h)
- 03.03.2015 Tuesday (13.10h - 15.15h)
- 03.03.2015 Tuesday (15.15h - 16.55h)
- 04.03.2015 Wednesday (9.00h - 11.05h)
- 04.03.2015 Wednesday (11.05h - 13.10h)
- 04.03.2015 Wednesday (13.10h - 15.15h)
- 04.03.2015 Wednesday (15.15h - 16.55h)

Description
In recent years, the UAB has seen recognition for its efforts in promoting quality in teaching, in attracting international talent and in obtaining a growing impact in research, together with a progressive improvement in its classifications in the most prestigious and influential international rankings. Thus, the UAB is well as occupying an outstanding position among Spanish universities in world rankings such as the QS World University Rankings (QS WUR), the Times Higher Education World University Rankings (THE WUR) and the Academic Ranking of World Universities (ARWU). It also ranks as one of the best young universities according to specific rankings made for universities less than half a century old by QS and Times Higher Education. We are in continuous development of novel inventions in many fields, and regarding this specific framework : Wireless power technology Electronic Engineering Computer Architecture and Operative Systems Microelectronics and electronic systems Telecommunications and Systems engineering. Nanotech We are looking for a company willing to acquire a competitive advantage via a license agreement of our technological offers protected by patent.
Organization Type
University
Organization Size
250+
LinkedIn
https://www.linkedin.com/pub/carlos-raga-camilleri/6a/374/ab7
Areas of Activities

HARDWARE

1. Antennas, aerial, masts and towers
2. IP networking equipment
3. Mobile devices
4. Monitoring systems and equipment
5. Power systems
6. Semiconductors
7. Telemetry systems
8. Test and measurement equipment

SOFTWARE/INTERNET

1. Application development
2. Content management

SERVICES/OTHERS

Offer

Device to enhance Wireless Power transmission

Device that is placed near the emitting and/or the receiving coil. It rearranges the magnetic energy in space, leading to an increase of the WPT neither modifying the distance between the emitting an receiving coils nor introducing any material between them (i.e. without modifying the effective distance of free space between emitter and receiver). It has been demonstrated effective at frequencies near the two standards that are being implemented for WPT.

INNOVATE ASPECTS AND ADVANTAGES:

-Simple construction with feasible and cheap commercial materials.
-Does not invade the free space between the emitter and the receiver.
-Suitable for high (>3MHz) and low (200KHz) frequencies.
-Improvement increases as the coils are placed further away
-Experimental tests with commercial coils approved for current standards (e.g : Qi) show improvements up to 220%

EP Priority date : 14/07/2014

Keywords: WPT wireless power charging device standard
Cooperation Offered

1. License agreement

Cooperation Requested

1. Technical co-operation
2. Manufacturing agreement
3. Investment/Financing

Offer

Metamaterial UHF-RFID Near-fild Antenna for Retail Aplications

An electric near-field antenna based on metamaterial structures, compatible with far-field tags, has been developed in order to provide a solution to this limitation. The use of this device at POS allows for a fast checkout and fast inventory process, being all items tagged uniquely with one far-field UHF-RFID tag.

The invention is nearly ready for industrialization

Demo video : https://www.youtube.com/watch?v=PMHr-fhzHE8

INNOVATE ASPECTS AND APPLICATIONS:

- Fast checkout: All items read and security disabled simultaneously.
- POS area perfectly defined: only desired items are detected.
- Items labeled with only one far-field, long read-range, tag for all applications (payment, inventory, security).
- Detection for any tag orientation.
- Very low far-field radiation.
- Low-cost fabrication using PCB standard processes.

PCT/EP2014/064806

Keywords: RFID retail Fast check
Cooperation Offered

1. License agreement

Cooperation Requested

1. Manufacturing agreement

Offer

Precise portable rescue device for fast avalanche victim localization

Portable rescue device and localization method for locating avalanche victims. It exploits the spatial diversity provided by an array of magnetic vector sensors to improve precision and reduce the time taken for locating the victim.

INNOVATE ASPECTS AND ADVANTAGES:

-Reduces localization time
-Better sensitivity (signal search)
-Precise location (fine search)
-No pinpointing

PCT/EP2014/069985

Keywords: magnetic array sensor portable rescue device
Cooperation Offered

1. License agreement

Cooperation Requested

1. Manufacturing agreement
2. Investment/Financing

Offer

Long Read-Range UHF-RFID Tags for Optical Discs (CD, DVD, Blu-Ray)

Several prototypes for tagging different kind of optical discs have been designed, fabricated and characterized.
The tag prototypes have been fabricated on RF/microwave substrates using standard PCB technology, but they can be implemented in inlays or using Printed Electronics techniques. Read-ranges up to 5m have been experimentally obtained, but this value can be further increased by using the latest commercially available UHF-RFID ICs.

INNOVATE ASPECTS AND APPLICATIONS:

- Read-range 10 times higher than current solutions (0.35-0.4m vs. 3-5m).
- Whole UHF-RFID regulated band covered.
- Simple design and low-cost fabrication.
- Tag antenna can be directly printed on disc or implemented in inlay.
- Stacked discs can be read

PCT/EP2014/062968

Keywords: RFID optical disc UHF tag
Cooperation Offered

1. License agreement

Cooperation Requested

1. Manufacturing agreement
2. Sales / Distribution
3. Investment/Financing

Offer

Piezoelectric nanogenerators with graphene and nanowires: Charge your phone while you walk!

We developed an electrode for a nanogenerator with a piezoelectric material made of an array of nanowires comprising of an interfacial flexible graphene single layer film between the nanowire apexes of the piezoelectric material and the top electrode. The graphene is
transferred directly on the nanowires before mounting the top electrode, said graphene layer being suitable of being adapted to said irregular shape. This methodology increases the contact area between the metal of the top electrode and the nanowires, reducing the contact resistance and enhancing the performance of the whole device.

INNOVATE ASPECTS AND APPLICATIONS:

- Lowers the electric contact resistance.
- Enhance the performance
- Provides very homogeneous current distribution along graphene electrode.
- Design of high efficiency devices such as uniform field effecct transistors, piezoelectric nanogenerators and electrodes in capacitors.

PCT/EP2014/064804

Keywords: graphene nanogenerator nanowires piezoelectric
Cooperation Offered

1. License agreement

Cooperation Requested

1. Technical co-operation
2. Manufacturing agreement
3. Sales / Distribution
4. Investment/Financing

Offer

Ultra-high performance Conductive Atomic Force Microscope tips coated with graphene

We successfully fabricated conductive tips for the CAFM (Conductive Atomic Force Microscope) that show ultra-high performance, by coating commercially available metal-varnished tips with a sheet of GSL (Graphene Single Layer)

following a standard transfer process.

INNOVATE ASPECTS AND ADVANTAGES:

- Graphene-coated tips are shown to be extremely stable and resistant under high currents and frictions.
- Longer device lifetime.
- Graphene prevents tip varnish/sample material interaction.

Applications: Current and topographical measurements at the nanoscale with AFM techniques that require conductive tips with
such characteristics.

PCT/EP2013/076362

Keywords: Microscope tips graphene AFM Atomic force Microscope Electrical characterization
Cooperation Offered

1. License agreement

Cooperation Requested

1. Manufacturing agreement
2. Investment/Financing