

Boletín VT

REDES DE SENSORES INALÁMBRICAS

38

2.º trimestre 2019

Vigilancia Tecnológica

Desde su aparición, los campos de aplicación de las redes de sensores inalámbricos se han ido ampliando de forma constante. La posibilidad de crear extensas plataformas de gestión integrada para la monitorización, captura de datos, y control remoto y en tiempo real mediante estas redes sensoriales, ha proporcionado una poderosa herramienta para el desarrollo de aplicaciones y servicios en sectores económicos tan diversos como el agrícola, el industrial o el de la administración pública.

El presente boletín, elaborado por la Unidad de Información Tecnológica de la Oficina Española de Patentes y Marcas (OEPM), pretende revisar la evolución de la innovación, en el marco de las patentes de las tecnologías TIC en relación con algunas de las aplicaciones más relevantes abordadas por las redes de sensores

inalámbricas, tales como: su uso en entornos agrícolas (gestión de cultivos, plagas, invernaderos, regadíos), su uso en entornos urbanos o públicos (seguridad ciudadana, infraestructuras, gestión de información medioambiental, polución, residuos) o su uso para la detección y gestión de incendios.

De este modo, el boletín, de periodicidad trimestral, recogerá las publicaciones más recientes de solicitudes internacionales de patente (solicitudes PCT) publicadas en el trimestre inmediatamente anterior a su elaboración. Se ha restringido el ámbito de este boletín a solicitudes PCT por considerarse que al ser estas solicitudes con las que las empresas pretenden proteger sus invenciones en distintos países, se corresponden con invenciones de una cierta relevancia tecnológica.

CONTENIDO:

- Redes de sensores para entornos agrícolas
- Redes de sensores para entornos urbanos o públicos
- Redes de sensores para detectar incendios
- Otras referencias

NIPO: 116-19-015-9

Solicitudes de Patente Publicadas

Los datos que aparecen en la tabla corresponden a una selección de las solicitudes de patentes PCT publicadas durante el trimestre analizado. Se puede acceder al documento completo haciendo clic sobre el mismo.

REDES DE SENSORES PARA ENTORNOS AGRÍCOLAS

Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2019112999	ITRADENETWORK INC	Device and method for item level traceability of crops
WO 2019104454	SZ DJI TECHNOLOGY CO LTD	Pesticide tank flow rate detection method, device and agricultural unmanned aerial vehicle
WO 2019112458	SHEVTSOV ANATOLY ANDREEVICH	System for creating micro-climate in fruit farms and vineyards
WO 2019102496	MAHINDRA & MAHINDRA LTD	Methods and systems for monitoring and controlling agricultural implement(s) attached to an agricultural vehicle
WO 2019109191	CAMSO INC	Systems and methods for monitoring off-road vehicles
WO 2019103851	CLIMATE CORP	Digital modeling of disease on crops on agronomics fields
WO 2019054918	DELAVAL HOLDING AB	Animal tag and method for monitoring animal behavior
WO 2019100011	DIVINE LOGIC INC	Systems and methods for tracking items
WO 2019079248	VERILY LIFE SCIENCES LLC	Insect sensing systems and methods
WO 2019100118	UNIV SYDNEY	Autonomous crop management system
WO 2019077551	DA SILVA SIMOES DE CARVALHO JOSE MIGUEL	A method and device for automatic integration of farm climate and biometric variables
WO 2019058324	GAMAYA SA	Plant-system with interface to mycorrhizal fungal community
WO 2019072442	BASF SE	Method for monitoring at least one aquaculture pond and aquaculture pond monitoring system
WO 2019100101	SUPERCOOL ASIA PACIFIC PTY LTD	Thermal response probe and method
WO 2019106639	SEEDX TECH INC	Systems and methods for sorting of seeds
WO 2019077417	UNIV KING ABDULLAH SCI & TECH	Sensor system, method of production, and sensor deployment system
WO 2019094602	CLIMATE CORP	Hybrid seed selection and seed portfolio optimization by field
WO 2019106638	SEEDX TECH INC	Systems and methods for sorting of seeds
WO 2019106641	SEEDX TECH INC	Systems and methods for sorting of seeds
WO 2019082178	HI IMPACTS LTD	Device, in-line system and method for detecting somatic cell level during milking
WO 2019089503	OBJECTVIDEO LABS LLC	Intelligent self-powered camera
WO 2019096525	ZAHNRADFABRIK FRIEDRICHSHAFEN	Method for operating a system made up of an agricultural working vehicle and at least one working tool arranged thereon
WO 2019095346	ZHOU GAOMING	Novel seed soaking apparatus
WO 2019081729	YARA INT ASA	Handheld device using a light guide and method for use thereof for determining a plant status
WO 2019070642	ADDISON DARRAL	Plant holder having internal watering system
WO 2019087336	MAEKAWA SEISAKUSHO KK	Environmental index unit and livestock house system
WO 2019091758	BOSCH GMBH ROBERT	Method for monitoring and/or modifying an active component concentration in a spray liquid of a spraying device
WO 2019091759	BOSCH GMBH ROBERT	Method for a spray device
WO 2019095352	ZHOU GAOMING	Novel forestry seedling apparatus
WO 2019092707	MARCHESINI GERARDO R	Integrated system for controlling, detecting, monitoring, evaluating and treating crop pests

WO 2019079205	PREC PLANTING LLC	Soil sensing systems and implements for sensing different soil parameters
WO 2019091756	BOSCH GMBH ROBERT	Method for a spraying device
WO 2019097038	BSH HAUSGERAETE GMBH	Device for cultivating plants
WO 2019075882	SHENZHEN GUOHUA OPTOELECTRONICS CO LTD	Test system based on sensitivity of humidity sensor
WO 2019081542	M FARMS GMBH	System for semi-automatic and/or automatic weed removal
WO 2019089336	VALMONT INDUSTRIES	System and method for irrigation management
WO 2019092869	SHINDENGEN ELECTRIC MFG	Plant system
WO 2019068835	KWS SAAT SE	Method and system for performing data analysis for plant phenotyping
WO 2019091796	BOSCH GMBH ROBERT	Method for monitoring and/or controlling a supplying process for a spray liquid at a spray nozzle unit
WO 2019059436	KIM JIN JOONG	Led smart flowerpot device
WO 2019057901	30MHZ B V	Monitoring device and system
WO 2019083229	KWON DAE CHACK	Speed sprayer remote control device using virtual reality
WO 2019075503	GEKA SOLUTIONS PTY LTD	Pest control system
WO 2019084516	TRIBUS LLC	System and method for measuring soil electrical conductivity
WO 2019049155	EDETE PRECISION TECH FOR AGRICULTURE LTD	System for dry artificial pollination of cultivated trees or shrubs by insect-borne pollen and method of doing the same
WO 2019090052	COMMAND SIGHT INC	Animal-wearable first person view system
WO 2019070743	CLIMATE CORP	Field measurement of soil element concentration
WO 2019079053	DOW AGROSCIENCES LLC	Pest control system and method of operating same
WO 2019089541	ONCE LABS INC	Remote vibration detection of submerged equipment using magnetic field sensing
WO 2019089456	TIONESTA LLC	Method and system for monitoring livestock
WO 2019059597	KOREA INST SCI & TECH	Smart nutrient solution supply apparatus for protected horticulture on basis of optimal valve control model
WO 2019084593	SMARTA IND PTY LTD	System and method for handling a bulk fluid
WO 2019112999	ITRADENETWORK INC	Device and method for item level traceability of crops
WO 2019104454	SZ DJI TECHNOLOGY CO LTD	Pesticide tank flow rate detection method, device and agricultural unmanned aerial vehicle
WO 2019112458	SHEVTSOV ANATOLY ANDREEVICH	System for creating micro-climate in fruit farms and vineyards
WO 2019102496	MAHINDRA & MAHINDRA LTD	Methods and systems for monitoring and controlling agricultural implement(s) attached to an agricultural vehicle
WO 2019109191	CAMSO INC	Systems and methods for monitoring off-road vehicles

[...ver más](#)

REDES DE SENSORES PARA ENTORNOS URBANOS O PÚBLICOS

Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

WO 2019106471	TE CONNECTIVITY CORP	Light sensor assembly comprising power contacts
WO 2019113144	ECHELON CORP	Self-healing lighting network
WO 2019113022	UNIV MASSACHUSETTS	Method to measure road roughness characteristics and pavement induced vehicle fuel consumption
WO 2019108986	MUNOZ MICHAEL	Internet of things (iot) enabled wireless sensor system enabling process control, predictive maintenance of electrical distribution networks, liquid and gas pipelines and monitoring of air pollutants including nuclear, chemical, and biological agents using attached and/or embedded passive electromagnetic sensors
WO 2019108892	AVAST SOFTWARE S R O	Identifying devices on a remote network
WO 2019077550	INESC TEC INSTITUTO DE ENGENHARIA DE SIST E COMPUTADORES TECNOLOGIA E CIENCIA	Interference aware transmission power control method and device for ieee 802.11 based wireless network with nodes having a directional antenna
WO 2019087101	3M INNOVATIVE PROPERTIES CO	System and method for anomaly detection in an electrical network
WO 2019094571	REDZONE ROBOTICS INC	Pipe feature identification using pipe inspection data analysis
WO 2019075434	HONEYWELL INT INC	Utility network monitoring device, system and method
WO 2019064658	YOKOGAWA ELECTRIC CORP	Systems and methods for securing fluid distribution systems
WO 2019079129	MICROSOFT TECHNOLOGY LICENSING LLC	Traffic data reconciliation and brokering
WO 2019069440	HITACHI LTD	Light emission device, light emission control method, and light emission control system
WO 2019098397	WAVE3D CO LTD	Drone control system for road operation and management
WO 2019060899	CONTINENTAL AUTOMOTIVE SYSTEMS INC	Compact modular wireless sensing radar infrastructure device
WO 2019067235	MUELLER INT LLC	Devices and methods for repairing pipes
WO 2019067583	SENSORMATIC ELECTRONICS LLC	Security camera system with multi-directional mount and method of operation
WO 2019067556	QUIPIP LLC	Methods for obtaining and providing information relating to concrete mixtures
WO 2019081305	SCHREDER SA	Control method and system for a luminaire, and luminaire comprising such a control system
WO 2019070619	WOODENSHARK LLC	Systems including a gateway receiving sensor data, and related methods
WO 2019055004	INTEL CORP	Common interface system for mesh networking and fog computing systems
WO 2019078918	PAPINEAU MICHAEL	System for incentive eligibility and validation for transport demand management (tdm) programs

[...ver más](#)

REDES DE SENSORES PARA DETECTAR INCENDIOS

Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

WO 2019113610	OPERATIONS TECH DEVELOPMENT NFP	System and method for gas sensing and monitoring
WO 2019107605	TODD FRANKLIN YISRAEL	Portable induction cooker and operation method thereof
WO 2019115596	TRINAMIX GMBH	Spectrometer device and system
WO 2019060585	CARRIER CORP	Dual wavelength detector
WO 2019081793	EXWIFIRE TECH S L	System for monitoring fire extinguishers
WO 2019048603	FCM DIENSTLEISTUNG S AG	Automatic early warning of smoke, soot and fire by means of a 3d terrain model
WO 2019084163	OSHKOSH CORP	Vehicle control system
WO 2019067454	CARRIER CORP	Life safety device with carbon monoxide monitoring
WO 2019089450	CARRIER CORP	Compensator in a detector device
WO 2019060066	GOOGLE LLC	Systems and methods of detecting and responding to a visitor to a smart home environment
WO 2019060514	ENG CORROSION SOLUTIONS LLC	Controllable air maintenance devices for fire protection systems
WO 2019083175	GREEN HIGH TECH CO LTD	Safety gas cutoff and management system comprising vibration sensor
WO 2019088609	CATHOLIC UNIV KOREA IND ACADEMIC COOPERATION FOUNDATION	Event signal processing method and device therefor
WO 2019098451	SHIN SUNG JAE	Remote fire extinguishing equipment and remote crime prevention and extermination equipment
WO 2019075110	ONEEVENT TECH INC	Fire detection system
WO 2019056272	SUZHOU BAJITE INFORMATION CONSULTING CO LTD	System for supervising dangerous chemicals in factory
WO 2019057607	FIREFLY AB	Flame detecting arrangement
WO 2019055708	4MORR ENTPR IP LLC	A system and method for effecting smoke detector data transmission from a smoke detector

[..ver más](#)

OTRAS REFERENCIAS

Nº PUBLICACIÓN SOLICITANTE CONTENIDO TÉCNICO

Nº PUBLICACIÓN	SOLICITANTE	CONTENIDO TÉCNICO
WO 2019112729	GEN ELECTRIC	Systems and methods for isolating faults in electrical power systems connected to a power grid
WO 2019104223	JUUL LABS INC	Electronic vaporizer sessioning
WO 2019114497	MIDEA GROUP CO LTD	Machine learning control of environmental systems
WO 2019109087	METRC LLC	System and method for programming wireless sensor tags in food service operations
WO 2019106373	OWLSTONE MEDICAL LTD	Spectrometry system
WO 2019106393	HYDRO SYSTEMS EUROPE LTD	Fluid dispenser including a data transfer device, and system incorporating same
WO 2019099088	SIEMENS AG	Risk analysys for indusrial control system
WO 2019103702	GENTEK ELEKTRONIK SAN TIC A S	Portable and chargeable a moisture, temperature and light recording device
WO 2019110303	HILTI AG	System and method for an automatic safety protocol in electrical tools
WO 2019075317	CONVIDA WIRELESS LLC	Interworking service for the restful internet of things
WO 2019113590	REALMFIVE INC	System and method for underground wireless sensor communication
WO 2019060819	CARRIER CORP	Wireless sensor power management
WO 2019067443	ZERMATT TECH LLC	Spatial audio navigation
WO 2019105730	HOCHSCHULE FUER ANGEWANDTE WSS HAMBURG	Sensor node and secured sensor network
WO 2019088845	HYPERVIG AS	Face recognition based access control system with user definable alert level
WO 2019108137	TRANSFERFI PTE LTD	Wireless power transmission
WO 2019110733	TEADE OUE	A self-organizing node and a sensor network with self-organizing nodes
WO 2019094958	BLUM RON	Alert sensing device and system
WO 2019099387	UNIV KENT STATE OHIO	Detection of gases and vapors by patterned nanoparticle liquid crystal alignment
WO 2019099296	RHEEM MFG CO	Integrated leak detection system for water heaters
WO 2019110294	SIGNIFY HOLDING BV	System, methods, and apparatuses for distributed detection of luminaire anomalies
WO 2019052851	TAUROB GMBH	Method and apparatus for protecting components in a housing
WO 2019067665	NOMINUM INC	Repurposing domain name system as a business data transport layer
WO 2019097521	TOUBOUL SHLOMO	Sticker communication method and system
WO 2019053524	ERICSSON TELEFON AB L M	Network-assisted scanning of a surrounding environment
WO 2019081770	PERPETUUM LTD	Monitoring an axle of a railway vehicle
WO 2019082185	ECOPLANT TECH INNOVATION LTD	Minimizing energy consumption by peripheral machines
WO 2019090050	EMERSON CLIMATE TECHNOLOGIES	System and method of adjusting compressor modulation range based on balance point detection of the conditioned space
WO 2019094721	STRONG FORCE IOT PORTFOLIO 2016 LLC	Methods and systems for the industrial internet of things
WO 2019079213	MH ELECTRIC MOTOR & CONTROL CORP	Sensor network node system with energy harvesting pickup/receiver
WO 2019095061	NEWTRAX HOLDINGS INC	System and method for automated monitoring of material movement and inventory
WO 2019043514	3M INNOVATIVE PROPERTIES CO	Wireless power transfer and sensing for monitoring pipelines

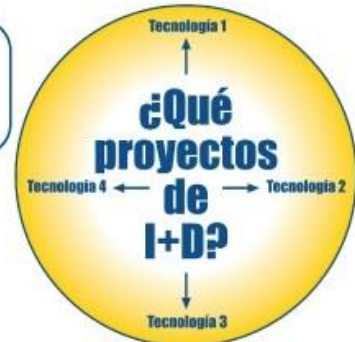
WO 2019053695	ERICSSON TELEFON AB L M	System and method for providing precise driving recommendations based on network-assisted scanning of a surrounding environment
WO 2019084392	NOON HOME INC	Intelligent lighting control system floor puck apparatuses, systems, and methods
WO 2019093815	CARLSON COMPANY LTD	Air purifying mask
WO 2019070951	NEW CONTEXT SERVICES INC	Autonomous edge device for monitoring and threat detection
WO 2019069690	SUMITOMO ELECTRIC INDUSTRIES	Wireless sensor system, wireless terminal device, relay device, communication control method, and communication control program
WO 2019082589	SUMITOMO ELECTRIC INDUSTRIES	Solar power generation system
WO 2019074442	AGENCY SCIENCE TECH & RES	Chemical sensor and method of forming the same
WO 2019089533	ONCE LABS INC	Determining, encoding, and transmission of classification variables at end-device for remote monitoring
WO 2019060669	SHOCKWATCH INC	Wireless environmental sensor
WO 2019082921	SMARTLURE CORP	Fishing assist system
WO 2019053520	MURUGAN M SENDHIL	A smart humidifier apparatus
WO 2019087502	SONY CORP	Information processing device, information processing method, and program
WO 2019087197	ALGAENNOVATION LTD	System and method of growing algae using geothermal gas
WO 2019080089	HONEYWELL INT INC	Smart height safety system
WO 2019084693	CYBER DEFENCE QCD CORP	Methods and systems for monitoring cyber-events
WO 2019091765	BSH HAUSGERAETE GMBH	Handheld scanner for improved stain detection, system comprising such a handheld scanner, and method for operation thereof
WO 2019086970	ABB SCHWEIZ AG	Detecting security events in wireless sensor networks
WO 2019087639	SUMITOMO ELECTRIC INDUSTRIES	Wireless sensor system, management device, communication control method and communication control program
WO 2019054196	DENSO CORP	Sensor system
WO 2019059000	EIZO CORP	Atmospheric temperature estimating device, atmospheric temperature estimating method, program and system
WO 2019070967	BUILDINGDNA	Sensor monitoring and mapping in a translated coordinate system
WO 2019066364	AMOSENSE CO LTD	Transportation data logging device and goods transportation system comprising same
WO 2019100082	SENSATEK PROPULSION TECH INC	Apparatus, systems, and methods for wireless monitoring of gas turbine engine temperature
WO 2019074618	MASSACHUSETTS INST TECHNOLOGY	Sensors including redox-active selector complexes
WO 2019046963	ISLAND WATER TECH INC	Bio-electrochemical sensor, system and method for monitoring and controlling organic carbon levels in a wastewater treatment process
WO 2019070691	UOP LLC	Remote monitoring of chloride treaters
WO 2019067638	PACIFIC GAS AND ELECTRIC COMPANY	Resource meter system and method
WO 2019053513	4III INNOVATIONS INC	Oil-well pump instrumentation device and surface card generation method
WO 2019112729	GEN ELECTRIC	Systems and methods for isolating faults in electrical power systems connected to a power grid
WO 2019104223	JUUL LABS INC	Electronic vaporizer sessioning

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Los ITPs** de la OEPM nos han ahorrado horas de revisión bibliográfica para definir el punto de partida de nuestros proyectos de I+D.

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Los ITPs** de la OEPM detectaron solicitudes de patente relevantes cuando estábamos a mitad del proyecto y gracias a ello pudimos reconducir nuestra investigación.

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Gracias a los ITPs** de la OEPM hemos podido decidir la mejor forma de protección de nuestros resultados de I+D y redactar adecuadamente nuestras solicitudes de patente.

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