



**Press release 5.2.2020 release free 19.00 CET**

## **Quality Innovation Award international winners 2019 announced**

**Universidad De Alcalá, MESMERISE® (Multi-Energy High Resolution Modular Scan System for Internal and External Concealed Commodities) is the winner of 2019!**

The Innovation of Innovations prize was awarded to Universidad De Alcalá from Spain.

Contactless, automatic and rapid technology for the detection of illegal substances or prohibited items concealed under the clothes or in the human body (weapons, drugs, explosives, etc.)

The winners of the Award passed a strict methodology of evaluation based on their novelty value, usability, learning, customer orientation and effectiveness. The winners were chosen by the chairmen and CEOs of the participating national Quality Associations via a rigorous voting process.

Quality Innovation Award has been organized for the 13<sup>th</sup> time by the Finnish Quality Association and the national quality organizations of the participating countries. Partner organizations were Basque Country, Botswana, China, Czech Republic, Estonia, Hungary, Israel, Kazakhstan, Latvia, Lithuania, Ruanda, Russia, South-Africa, Serbia, Spain, Swaziland, Sweden and Zimbabwe.

A total of 508 innovations participated in the competition and the best 24 were recognized in the Award Ceremony on 5<sup>th</sup> of February 2020 in Tel Aviv, Israel, hosted by the Israeli Institute for Quality, Innovation and Excellence. The diplomas signed by the President of the Republic of Finland Mr. Sauli Niinistö were awarded by Ambassadors and official representatives of participating countries.

**For more information, please see [www.qualityinnovation.org](http://www.qualityinnovation.org) or contact**

**LAATUKESKUS EXCELLENCE FINLAND**

**Tani Järvinen**

**Chairman International Quality Innovation Award**

**+358 40 844 5767**

**[tani.jarvinen@laatukeskus.fi](mailto:tani.jarvinen@laatukeskus.fi)**



## **Full list of awards:**

### ***Innovation of Innovations***

#### UNIVERSIDAD DE ALCALÁ / Spain

MESMERISE® (Multi-Energy High Resolution Modular Scan System for Internal and External Concealed Commodities).

Contactless, automatic and rapid technology for the detection of illegal substances or prohibited items concealed under the clothes or in the human body (weapons, drugs, explosives, etc.)

### ***Potential innovations***

#### Award Winner: MULTI4 AB / Sweden

**MULTI4-the future of cancer diagnosis and treatment**

Revolutionary instrument for cancer diagnosis and treatment, performed in few minutes thanks to brand new and patented technology. Less suffering, significant cost savings and intervention on time.

#### Prize Winner: Solteq Oyj / Finland

**Solteq's Retail Robot: an autonomous, mobile robot for retail stores, which operates in real time.**

Solteq's Retail Robot combines machine vision with an autonomous mobile robot in stores. It detects empty shelves, price tag information and missing products, integrates the data, and checks its accuracy in real time.

#### Prize Winner: National Research University "Moscow Power Engineering Institute" / Russia

**Distributed Intelligent Microgrid**

Intelligent devices for the accumulation and management of electricity consumption for developing regions, ensuring their self-organization into a balanced microgrid with a fair distribution of energy resources.

## **2. Responsible & renewable innovations (Circular economy innovations)**

#### Award Winner: Biofactoría Naturae et Salus / Spain

**More food, less waste**

Eco-friendly manufacturing of healthy foods based on fruits and vegetables, without any chemical preservatives, through a business model and production based on the circular economy, in which ugly vegetables are given a second chance outside that would otherwise be discarded.



### Prize Winner: Nuclear Power Institute of China / China

#### Research and development of model ZH-65 steam generator (SG) for HPR1000 Nuclear Power Plant

The project has significantly increased the steam quality, seismic capacity and lifetime of steam generator for HPR1000 Nuclear Power Plant, creating over \$700 million revenue, and tremendous social & environmental benefit.

### Prize Winner: Nokia Oyj / Finland

#### Liquid-cooled radio base station

In our project a liquid-cooled radio base station was developed. The concept was demonstrated with the world's first liquid-cooled base operating at commercial network.

### ***Health care sector innovations***

### Award Winner: Donostialdea Integrated Healthcare Organization -OSAKIDETZA / Spain

#### Strategic innovation for multifaceted and multidisciplinary intervention aimed at multipathology patients

Distinct intervention for complex chronic patients who consume more of our system's resources and thus improve their quality of life, reduce days in hospital and favour integration.

### Prize Winner: The Second Affiliated Hospital of Army Medical University of People's Liberation Army of China / China

#### Establishing and Application of Minimally Invasive Endoscopic Fusion Technique for Lumbar Disc Diseases

Establishing a minimally invasive endoscopic technique for lumbar intervertebral disc diseases and achieve better therapeutic effects, less trauma and less complications with less medical costs.

### Prize Winner: Institute for experimental phonetics and speech pathology "Đorđe Kostić" (IEPSP) / Serbia

#### Electrophysiological correlates assessment of speech-language processing

Electrophysiological correlates assessment of speech-language processing is an innovative method developed in IEPSP that is used for examination of electrophysiological correlates of brain processing for defined auditory, visual, audio-visual and verbal stimuli in children of typical and atypical speech-language development.



## ***Education sector innovations***

### **Award Winner: WordDive Ltd / Finland**

#### **Speak with AI**

Speak with AI is an artificial intelligence-based mobile app for learning to speak English. The app recognises pronunciation errors made by the user and provides personal feedback for correcting them.

### **Prize Winner: Bashkir State Pedagogical University named after M. Akhmulla / Russia**

#### **Lotto game "A Human – Society – Nature" for socialization and development of skills of children and adults with visual impairment**

The new educational method is proposed as well as methods of socialization for persons with visual disabilities and specialists working with them through development of abilities to percept the world around them in a game form.

### **Prize Winner: SANTILLANA GLOBAL S.L. / Spain**

#### **SET VEINTIUNO**

Educational solution to introduce in a systematized way the skills for the XXI century (soft-skills) in the school and prepare the students to become the citizens of a changing and complex world.

## ***Public services innovations***

### **Award Winner: UNIVERSIDAD DE ALCALÁ / Spain**

#### **MESMERISE® (Multi-Energy High Resolution Modular Scan System for Internal and External Concealed Commodities).**

Contactless, automatic and rapid technology for the detection of illegal substances or prohibited items concealed under the clothes or in the human body (weapons, drugs, explosives, etc.)

### **Prize Winner: Electronic Communications Office / Latvia**

#### **Electronic Communications Office Software SKUDRA for mobile and fixed monitoring**

Development of software and algorithms for detection of transmissions and descriptive representation of results leading to efficient spectrum monitoring.

### **Prize Winner: Region Gotland / Sweden**

#### **Sustainable treatment of landfill gas with energy recycling**

Purification of landfill gas through RTO, minimizes methane emissions and enables energy recovery through heat exchange to district heating networks, which finances investment and operation.



### ***Business innovations (micro & startup)***

#### **Award Winner: Tevel Aerobotics Technologies Ltd / Israel**

##### **Autonomous Fruit Harvesting, On Demand**

To lead in the transformation of fruit harvesting from a traditional labour-intensive practice into fully autonomous flying fleets of robots guided by AI that significantly increase fruit yields and quality while reducing operating cost.

#### **Prize Winner: Beijing Aerospace Automatic Control Institute Detection System Business Division / China**

##### **Port Container Hauling Truck Anti-lifting System Based on Machine Vision**

It realizes accurate recognition and quick warning of container hauling truck error-lifting accidents based on machine vision for the first time, and thoroughly resolves this worldwide safety and efficiency problem in the industry.

#### **Prize Winner: TOO «Absolute technologies lab» / Kazakhstan**

##### **Absolute Cryptography**

Completely new technology in the field of cryptography. Our encryption algorithm is at least 10 times faster than RSA (this is the leading method of encryption in many countries now) for encrypting small documents, and more than 100 times faster for large files. Our algorithm is not only post-quantum, but designed for a non-deterministic Turing machine. Future super computers and quanta will not be able to hack us.

### ***Business innovations (small and medium sized)***

#### **Award Winner: Sanatmetal Ltd. / Hungary**

##### **WIWE heart diagnostics device**

WIWE is a bankcard sized personal ECG device - the most advanced of its kind in the world – developed to assess the risk of stroke and, in a world unique way, sudden cardiac arrest. It was issued a CE mark in medical device category.

#### **Prize Winner: Shanxi Taigang Stainless Steel Precision Strip Co., Ltd. / China**

##### **Process Technology and Series Product Development of Wide Ultra-thin Precision Stainless Steel Strip**

To meet the demand for light, high-strength and precision material by customers, an innovation on process technology and product development was carried out for precision stainless steel strip or foil with thickness of 0.02mm.



### Prize Winner: PigCHAMP Pro Europa / Spain

#### **Biorisk: Platform for the evaluation of biosecurity protocols and the prediction of on-farm disease outbreaks**

It allows to register the movements of the personnel inside the farm, classifying them according to their risk. Integrating them with sanitary parameters, biological threats with great economic losses are prevented.

#### ***Business innovations (large companies)***

### Award Winner: NorDan AB / Sweden

#### **3D printed windows/doors in biomaterial and world 's first biocomposite window producer in 3D printer**

On 10 Oct 2019 NorDan launched 3D printed circular windows for sales in the Scandinavian market (product innovation). Process innovation applying 3D printer and renewable innovation using biomaterial.

### Prize Winner: GREE Electric Appliances, Inc. of Zhuhai / China

#### **Research and Application of High-Precision Magnetic Suspension System**

The HPMSS (High-Precision Magnetic Suspension System) is a novel driving device with characteristics of high efficiency, maintenance-free and low noise. It can realize oil-free, friction-free, high-speed, energy saving and reduce CO2 emissions greatly.

### Prize Winner: R&D Center of Federal Grid Company , scientific partner – NRU MPEI / Russia

#### **Green Power Smart Substation**

Technology to reduce energy consumption at substations through the use of dissipated heat of power equipment for heating buildings and smart cooling systems for power equipment.