

## SpineGuard and ISIR win best Paper Award for Robotic guidance using DSG® real time sensing at Hamlyn Symposium

**PARIS and SAN FRANCISCO, June 26, 2019 – 18h15 CEST** – SpineGuard (FR0011464452 – ALSGD), an innovative company that deploys its DSG® real time digital technology for surgical guidance intended to secure and streamline skeletal implant placement, announced today that the first scientific paper on the usage of its DSG sensing technology for guidance of robotic surgical platforms won best paper 1<sup>st</sup> prize at the Hamlyn Symposium on Medical Robotics June 24-26th 2019 in London, United Kingdom.



The pre-clinical feasibility awarded study presented the utilization of DSG measurements, performed directly in contact with bone during drilling, without the necessity of X-rays. The purpose is to provide real-time feedback to surgical robots and prevent breaches through the cortical bone barrier, potentially harmful when undetected. The publication is the result of collaboration between SpineGuard and ISIR (Institut des Systèmes Intelligents et de Robotique), a laboratory affiliated to Sorbonne University, CNRS (Centre National de la Recherche Scientifique) and INSERM (Institut National de la Santé et de la Recherche Médicale). The Hamlyn Symposium is recognized as one of the top meetings worldwide regarding medical robotics and is at the forefront of research in imaging, sensing and robotics for addressing global health challenges associated with demographic, environmental, social and economic changes.

**Stéphane Bette, CEO and co-founder of SpineGuard, said:** “This was the first publication of the experimental results with DSG applied to robotics, and we are delighted to receive the best paper award. Receiving first prize provides a meaningful recognition by experts in the scientific community and underscores the potential of DSG technology application in medical robots. It rewards the quality of our collaborative research with ISIR and is a key asset to trigger strategic industry partnerships to incorporate the DSG technology in surgical assistance platforms. After validating the “smart” DSG-embedded pedicle screw for spine surgery and the DSG drill for dental implantology, we are now advancing the proof and value of DSG sensing for surgical robots in skeletal procedures as described in the corresponding intellectual property filed in 2017. We want to reiterate our optimism as SpineGuard pursues the strategic turn it engaged in 2015 with the deployment of its DSG technology in new clinically relevant applications to drive further growth, capitalizing on our optimized and profitable historic PediGuard device business.

**Guillaume Morel, Professor at the Sorbonne University, adds:** « The paper is co-authored by a mixed team, with Jimmy da Silva, a SpineGuard engineer enrolled in a PhD program at Sorbonne University, Thibault Chandanson, SpineGuard R&D Manager and me. This reflects the nature of our partnership: it is not just transferring research results from my lab to SpineGuard. Rather, we closely work, on a daily basis, on producing advances towards future innovation with a central focus on the combination between DSG and robotics. The national Carnot label, attributed to our lab within Carnot Interfaces, promotes this approach. It is fruitful, as it produces not only intellectual property but also major research contributions. This is not that frequent in public-private partnerships. We are particularly honored by this prize, as a jury that enrolls members from academia, industry, and clinical world has awarded it. They liked the limpidity and efficiency of the proposed method: just a simple idea that generates new safety functions for robotic spine surgery without using X-rays. Nice to have? Indeed. But I would say that we’re heading towards something that may become soon a must-have in the next generation of robotic orthopedic surgery.”

## About SpineGuard®

Founded in 2009 in France and the USA by Pierre Jérôme and Stéphane Bette, SpineGuard is an innovative company deploying its proprietary real-time digital technology DSG® (Dynamic Surgical Guidance) to secure and streamline the placement of implants in the skeleton. SpineGuard designs, develops and markets medical devices that have been used in over 70,000 surgical procedures worldwide. Fourteen studies published in peer-reviewed scientific journals have demonstrated the multiple benefits DSG® offers to patients, surgeons, surgical staff and hospitals. Building on these solid fundamentals and several strategic partnerships, SpineGuard has expanded its technology platform in a disruptive innovation: the « smart » pedicle screw launched late 2017 and is broadening the scope of applications in dental implantology and surgical robotics. DSG® was co-invented by Maurice Bourlion, Ph.D., Ciaran Bolger, M.D., Ph.D., and Alain Vanquaethem, Biomedical Engineer.

For further information, visit [www.spineguard.com](http://www.spineguard.com)

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## About Carnot Interfaces

Founded in 2016 in Paris, Carnot Interfaces consolidates five labs (LIP6, ISIR, LIB, LIMICS and UMR.S1158) specializing in IT, Robotics and healthcare technologies with the vision of developing R&D partnerships with the industry. The institute holds the “Tremplin Carnot” labelling, a proof of excellence under the stewardship of Sorbonne University, CNRS and INSERM, all internationally recognized between the most innovative R&D actors. Carnot Interfaces regroups over 800 R&D professionals with standards of excellence in research, dynamic teams and a proven track of record in partnerships with the industry. It is a key player in the fields of digital with over 15 million euros of deals in its first year after inception.

For further information, visit [www.carnot-interfaces.fr](http://www.carnot-interfaces.fr)



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