



LABORATOIRE DE COMMUNICATIONS ET  
D'INTÉGRATION DE LA MICROÉLECTRONIQUE

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Professeur  
Directeur du LaCIME*



ÉCOLE DE  
TECHNOLOGIE  
SUPÉRIEURE  
Université du Québec

# What we do

LACIME

Micro/nano  
fabrication

*LTCC*

*MEMS*

*Nanomatériaux*

*Biomatériaux*

*Électronique*

*imprimable*

Micro-  
électronique

*Circuits intégrés*

*Circuits RF*

*Configurabilité*

*des circuits*

*Fiabilité*

*Antennes*

Photonique

*Ondes THz*

*Capteurs optiques*

*Spectroscopie*

*Dispositifs*

*photoniques*

Traitement de  
l'information

*Traitement de  
signal*

*Communications*

*Apprentissage*

*machine*

<https://www.youtube.com/watch?v=0fxoFSO7XuY>



**102 Graduate Students**  
**18 Postdoctoral Fellows**  
**2 Lab Coordinators**

# 15 Faculty Members



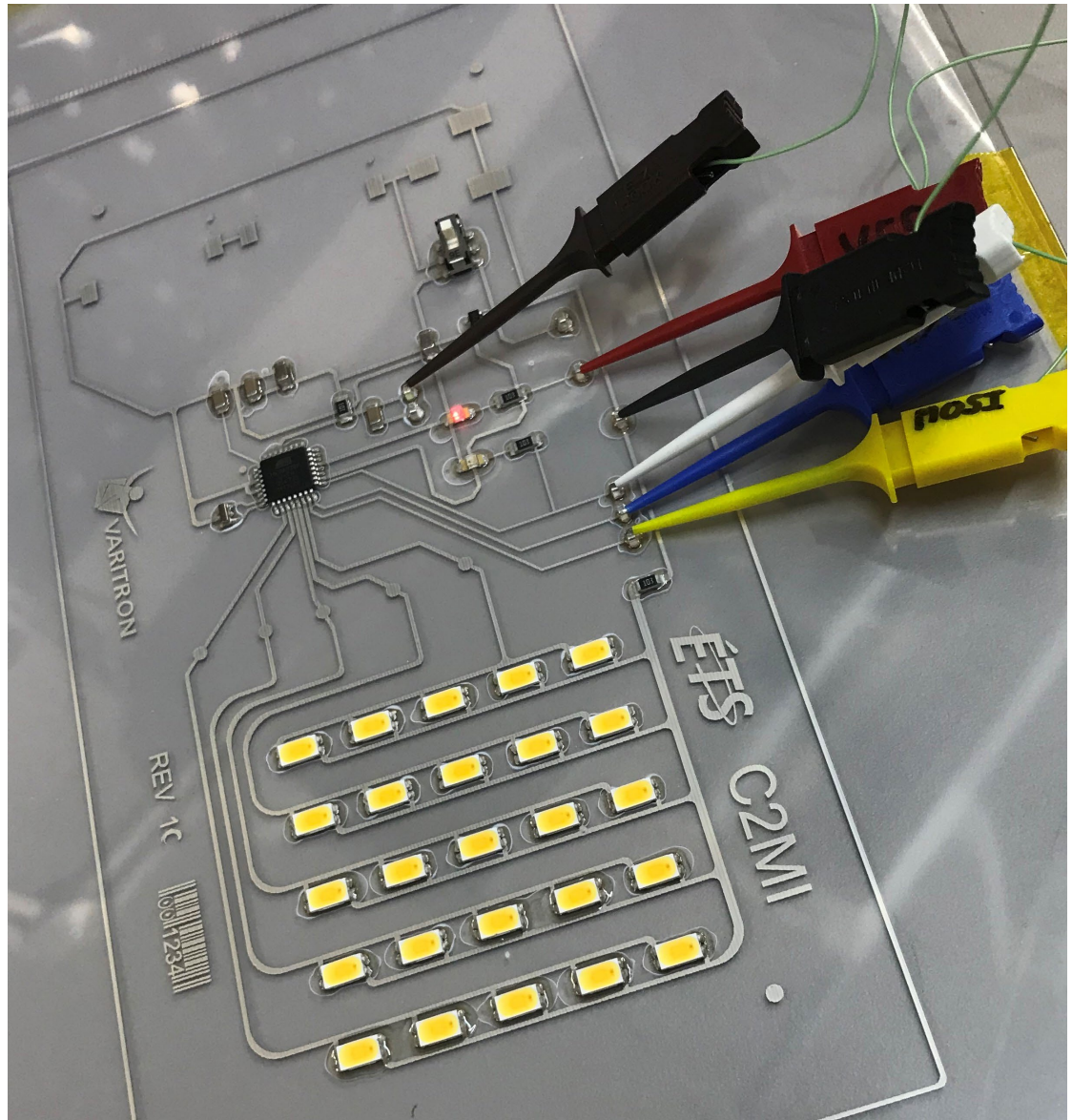


# Democratizing blockchain technology



P A S C A L   G I A R D

# Ultra-low-cost Printed Flexible Sensors for Disruptive IoT Applications



S Y L V A I N C L O U T I E R

# Solar Cell Characterization



R I C A R D O I Z Q U I E R D O

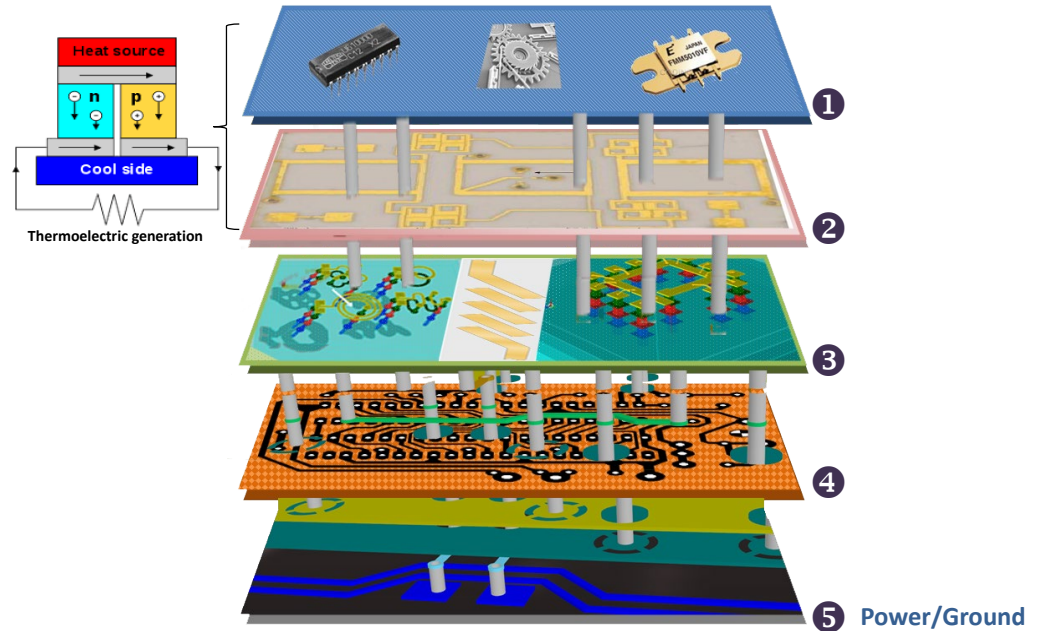


# Beyond 5G Networks and Tactical Communications

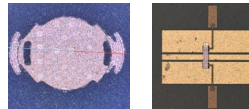


G E O R G E S   K A D D O U M

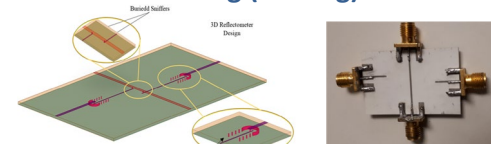
# Smart and Programmable RF Circuits



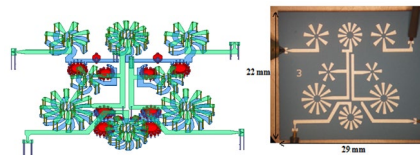
## ① MEMS/Active devices



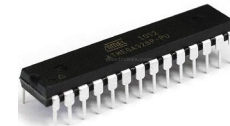
## ③ Embedded Sensing (sniffing)



## ② Lumped/Distributed Passives

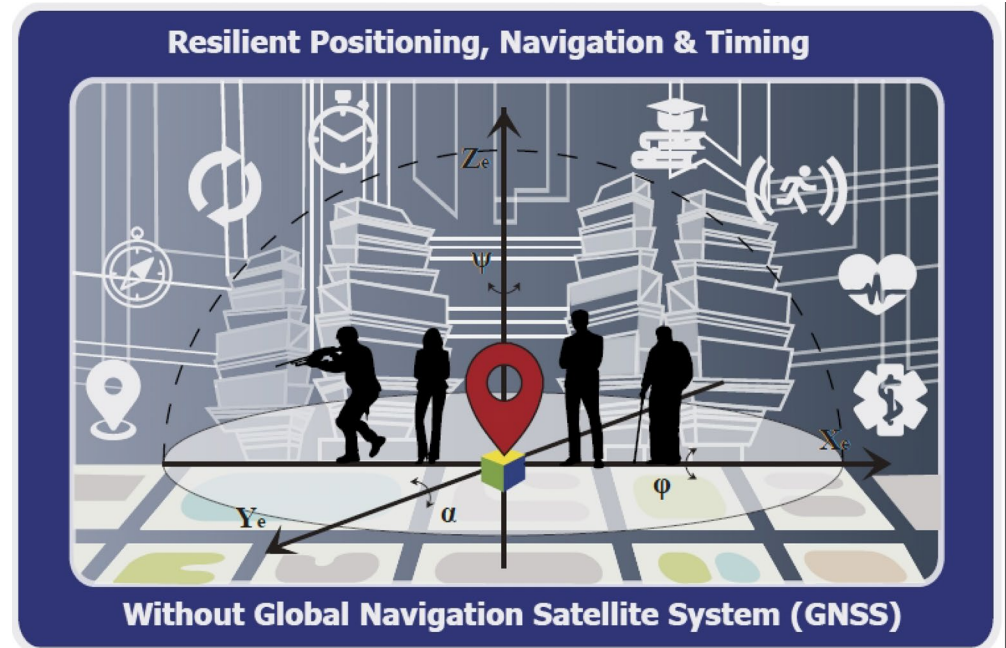
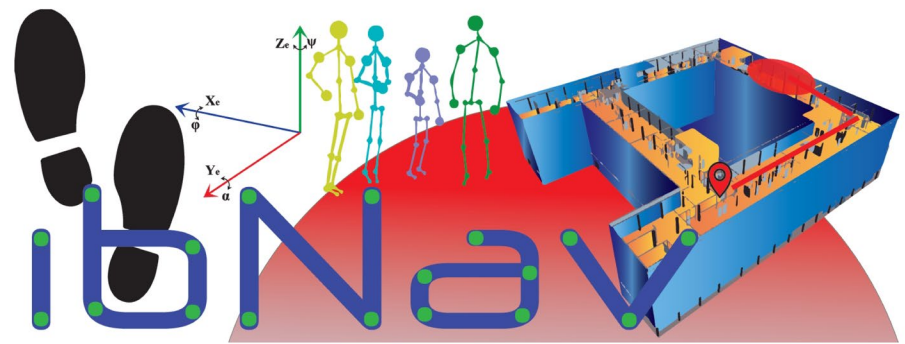


## ④ Control (intelligence/program)



A M M A R B . K O U K I

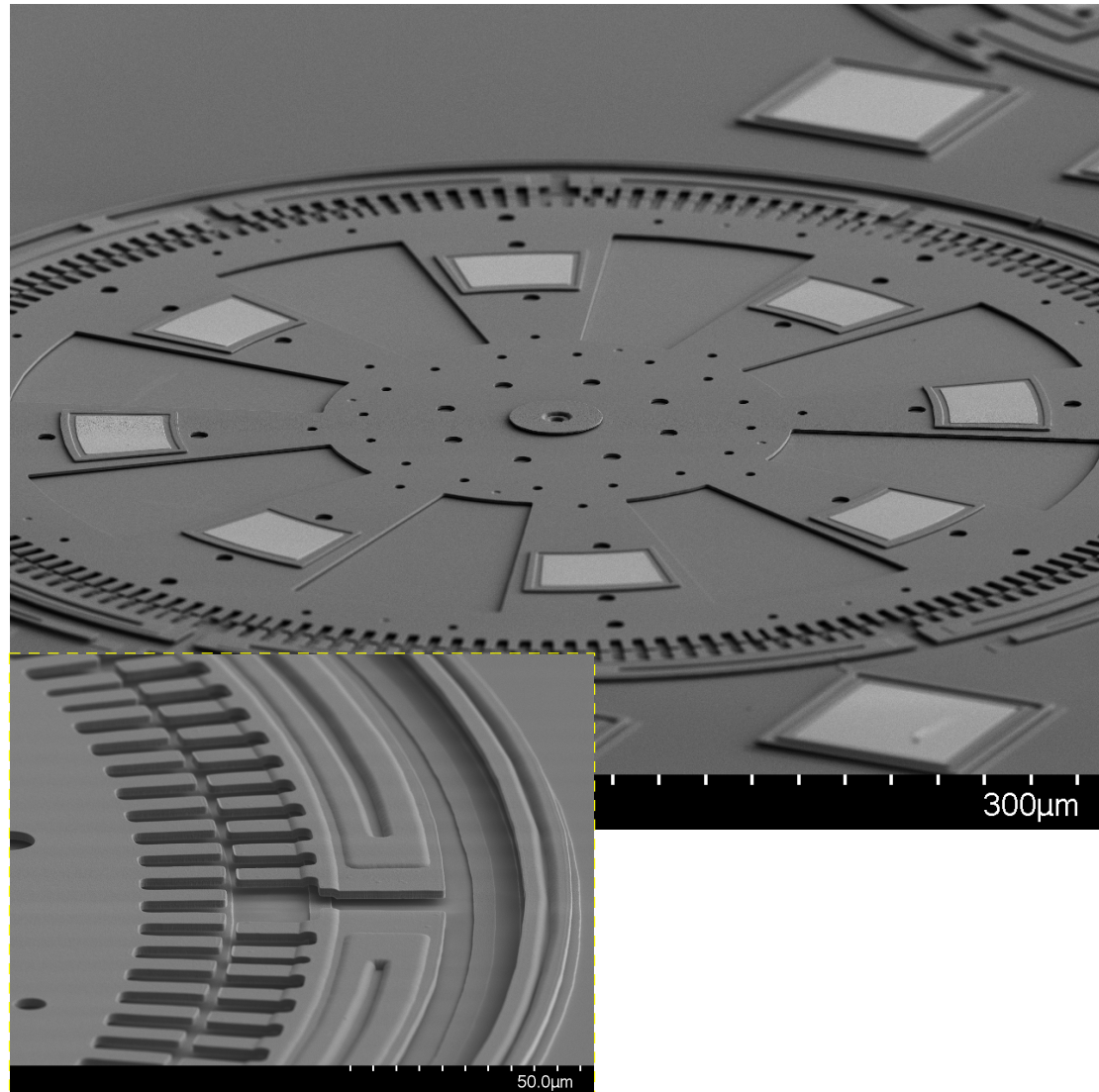
# Intelligent Body Navigation / Resilient Positioning, Navigation and Timing



National Défense  
Defence nationale

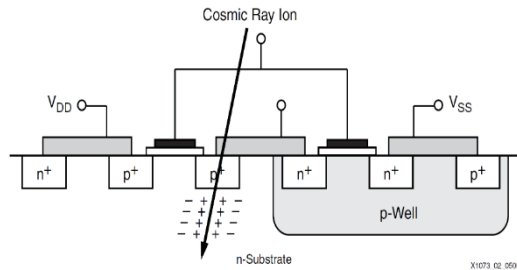
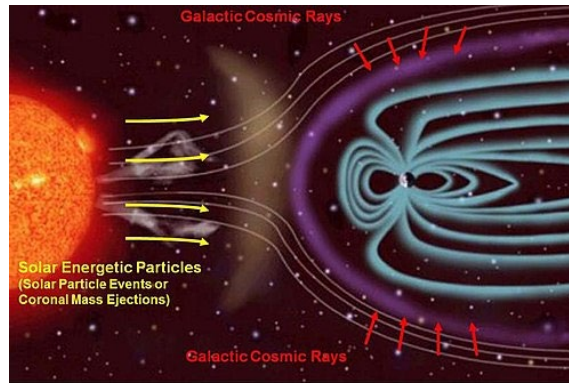
R E N É J R . L A N D R Y

# Micro Electromechanical Systems for Miniature Sensors and Integrated Optics

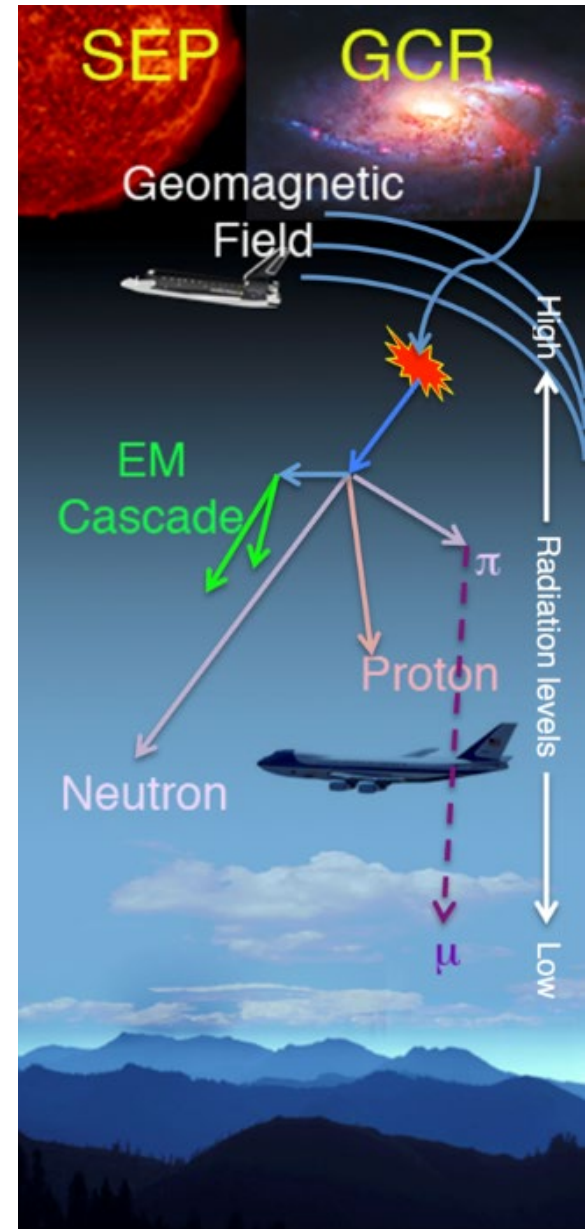


F R É D É R I C N A B K I

# Effects of Cosmic Radiations on FPGA's



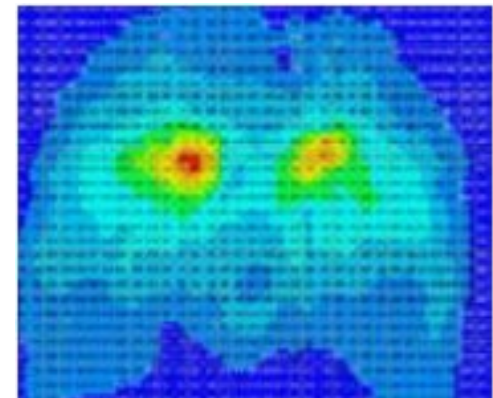
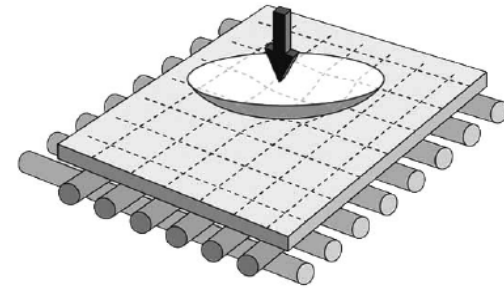
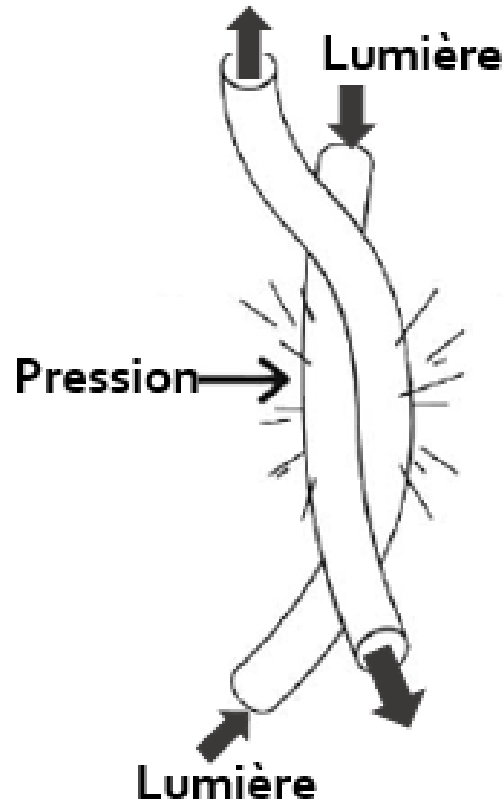
From **ATSB TRANSPORT SAFETY REPORT** Aviation Occurrence Investigation AO-2008-070:  
“At least 110 of the 303 passengers and 9 crew members were injured”;  
“The investigation identified single event effect (SEE) as an ongoing risk for airborne equipment. “



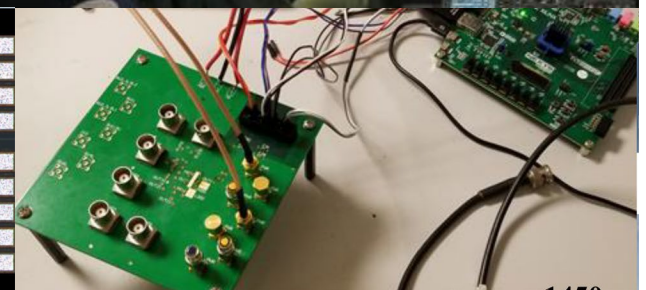
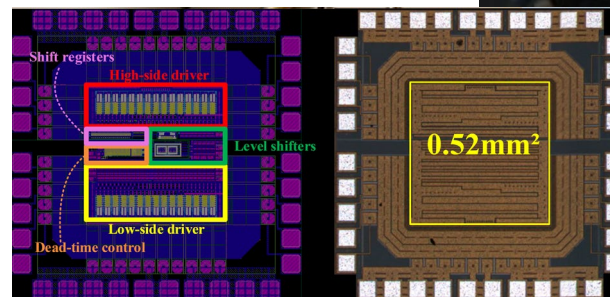
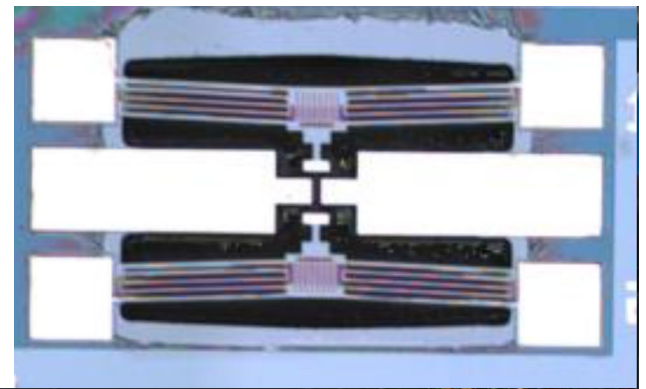
C L A U D E T H I B E A U L T

# Photonic sensors for biomedical applications

## Fibres en polymères



# Configurable Power Input/Output System for Avionic Applications



THALES

Y V E S   B L A Q U I È R E  
N I C O L A S   C O N S T A N T I N  
F R É D É R I C   N A B K I

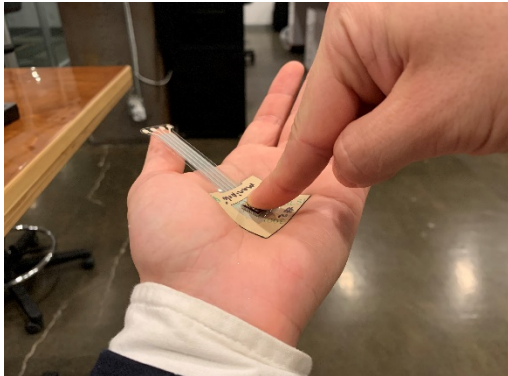
# Fractures in Smart Crystals



R I C A R D O   Z E D N I K



# Contactless Electro- Cardiography (C-ECG)



**SIG.NUM**  
Defining the new ECG standard of CARE

G H Y S L A I N      G A G N O N  
R I C A R D O      Z E D N I K