

# Printed Electronics applied to BIOTECH and MEDTECH

July 4<sup>th</sup> 2023



9.00 / 10.00	Welcome Session. Coffee. Poster Access. Booth Access. Early Networking	
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10.00 / 10.05	<b>Umbrella Introduction HEPIA HES-SO</b>	Prof. Adrien Roux
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10.05 / 10.10	<b>Umbrella Introduction AFELIM</b>	Jean-Marie Vau
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10.10 / 10.35	<b>KeyNote: LIMITATIONS OF CURRENT NON-INVASIVE CARDIAC MONITORING AND A WISH LIST FOR TOMORROW TODAY!</b>	HUG – Prof. Dipen Shah
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## Printed Sensors and Actuators

10.35 / 11.00	<b>Printed electronics for medical applications</b>	CEA-LITEN, Didier Gallaire et al
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11.00 / 11.25	<b>Advanced manufacturing of Electronic devices</b>	iPrint, Dr. Rajasundar Chandran
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## Printed Sensors and Health Monitoring

11.25 / 11.50	<b>Electronics and stretchable inks for medical applications</b>	CTS, Hortense Gaya
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11.50 / 12.15	<b>Helmet for partially sighted or blind swimmers</b>	EYECAP' Anna Gräbner, Aziz Orfia, Luis Miranda
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12.15 / 12.40	<b>Use of organic piezoelectric printed sensors in patient monitoring</b>	ARKEMA, Dr. Fabrice Domingues Dos Santos
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12.40 / 14.30	Pause & Networking	
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14.30 / 14.55	<b>KeyNote: ADDITIVE AND DIGITAL MANUFACTURING OF SENSORS FOR CUSTOMIZED WEARABLES AND DISPOSABLE LABEL</b>	Dr. Danick Briand, EPFL, Neuchâtel, Switzerland & Dr. med Mathieu Saubade, CHUV, Lausanne, Switzerland
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## Point of Care

14.55 / 15.20	<b>Connected solutions for the future of healthcare</b>	LINXENS, François Germain
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15.20 / 15.45	<b>Low field MRI with printed Electronics</b>	HEPIA-HEDS, Marie-Anais Petit
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15.45 / 16.10	<b>Soft and Stretchable Implantable Electrodes to Interface with the Human Brain</b>	NEUROSOFT BIOELECTRONICS, Ludovic Serex
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## Smart Packaging for Pharmaceuticals

16.10 / 16.35	<b>CryoTag Project: temperature threshold overrun</b>	HEPIA, Dr. Delphine Bechevet et al
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16.35 / 17.00	<b>Smart Sustainable packaging using paper and printed electronics</b>	FEDRIGONI, Dr. Gael Depres et al
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17.00 / 17.20	<b>Conclusions and Questions</b>	HEPIA and AFELIM
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17.30	END	
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## SUBSCRIPTION & SPONSORING

### SUBSCRIPTIONS NON MEMBERS AFELIM

**FULL PASS DAY**                      **190 € HT**                      **186 CHF without VAT\***

### SUBSCRIPTIONS MEMBERS AFELIM

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### SUBSCRIPTIONS ACADEMICS & RESEARCHERS

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Include space for one poster per entity (max 20 spaces available)

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For swiss and afelim members r&d labs (limited space available)

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\*VAT at 20% in France

**SPEAKERS, JULY 4<sup>TH</sup>,  
BIOTECH CAMPUS, GENEVA,  
PRINTED ELECTRONICS SWISS DAY**



**Prof. Adrien Roux,**  
Director HEPIA HES-SO,  
Associate Professor in Bio-Engineering Head of inSTI and inIT R&D institute

Adrien Roux has worked in both academic (CNRS, faculty of pharmacy, Curie Institute) and industrial environment (Thermo-Fisher, Merck Serono) and hold a PhD in Biology (University of Geneva). Since 2019, he is associate professor of the Tissue Engineering Laboratory (HEPIA, HES-SO) and work on the integration of engineering technics in various in vitro cellular model. His lab is located at the Campus Biotech, Geneva and he is also heading the inSTI and inIT Research Institutes.



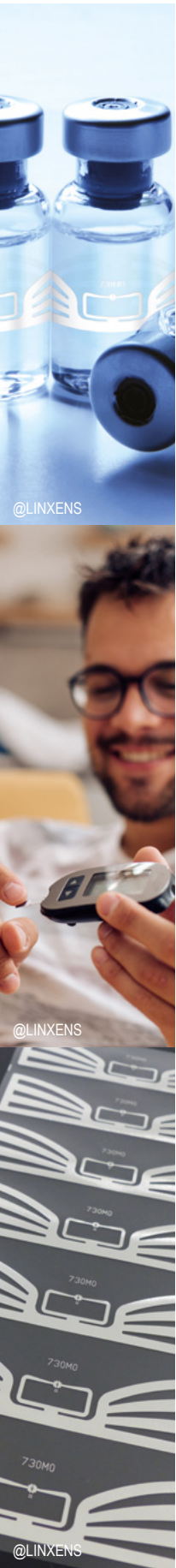
**Jean-Marie Vau,**  
General Delegate  
AFELIM, Association Francophone d'Électronique Imprimée, Paris

Jean-Marie Vau is the CEO and Co-Founder of GRIMMVAU SAS, an Innovation Management Consulting Firm created in 2020 and headquartered in central Paris - France. He currently holds the position of General Delegate for the French Association for Printed Electronics (AFELIM) to support the development and deployment of the Printed Electronics Ecosystem and Value chain in France and Internationally. From 2008 to 2020 Mr Vau has been the Innovation & Technology Director of ARJOWIGGINS Creative Papers in charge of Product & Process Development with R&D teams in France, U.K and Spain. One of Mr. Vau's primary roles includes the management of the Multiple Awards winning PowerCoat Paper Program that introduced new revolutionary paper substrates to the Printed Electronics Industry. Previously, Mr Vau lead multidisciplinary R&D teams for EASTMAN KODAK in Europe, and was in charge of the development of Mobile Imaging Technologies applied to cell phones, leading to the creation of the first portfolio of imaging patents for the mobile market. Jean-Marie Vau holds a Master's Degree in Electronics and Information Theory from Grenoble Institute of Technology - PHELMA (France). He studied Marketing, Technology Marketing and Business Administration at the Simon Business School in Rochester, N.Y (USA) and at INSEAD (France). He is the inventor/co-inventor of more than 60 international patent families.



**Prof. Dipen Shah,**  
Hôpital Universitaire  
Genève

Dipen Shah trained as an interventional cardiologist in India, then as an electrophysiology fellow in Bordeaux with Pr Haissaguerre. He spent 6 years in Bordeaux, performing clinical research related to the catheter ablation of atrial flutter, and fibrillation as well as participating in the development of pulmonary vein isolation. He joined the University Hospitals Geneva as a staff electrophysiologist in 2002 and is currently director of the electrophysiology unit. His current interests include catheter ablation and lesion estimation technologies as well as ablation strategies for atypical flutter, persistent AF and analysis of the underlying mechanisms. He has performed more than 3,500 catheter ablations, has 3 worldwide patents and has published more than 230 peer reviewed publications.



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## SPEAKERS, JULY 4TH, BIOTECH CAMPUS, GENEVA, PRINTED ELECTRONICS SWISS DAY



**Didier Gallaire,**  
Process Improvement Engineer on Materials,  
CEA-LITEN, Grenoble

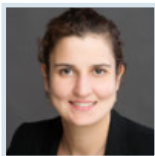
Graduated in Chemistry and Material Science from the University of Strasbourg (France) in 2000, I first worked during 9 years for the industry of LCDs. Then I joined CEA in 2010 to work on printed electronics while our platform dedicated to flexible and hybrid electronics were raised. As a process engineer I was involved in the setup of some tools and then my concerns were to use these equipments for different projects and applications such as organic photodetectors, antennas, fingerprint sensors or medical devices.

Two years ago this experience lead me to take the responsibility of the operational management of the platform and to keep on further developing the flexible and hybrid electronics.



**Dr Rajasundar Chandran,**  
Head of Advanced Manufacturing at iPrint Center,  
Montreux

With a PhD in Materials Science and Engineering from the reputed Swiss Federal Institute of Technology Lausanne (EPFL), Dr. Rajasundar Chandran is a materials and manufacturing scientist in the field of advanced manufacturing, sustainable and rehabilitation technology. Over the last 10 years, he has focused on developing and implementing innovative manufacturing and materials solutions for several Swiss SMEs and startups. He is currently the Head of the Advanced Manufacturing group at the iPrint Center, Switzerland focusing on novel AM technologies for diverse industrial applications. He is also one of the key inventors of an affordable high performance prosthetic foot for the International Committee of the Red Cross (ICRC), Geneva where he is also appointed as an expert consultant to industrialize the product globally.



**Hortense Gaya,**  
Product Manager in Thick Film Technology,  
CTS, Greater Paris Metropolitan Region

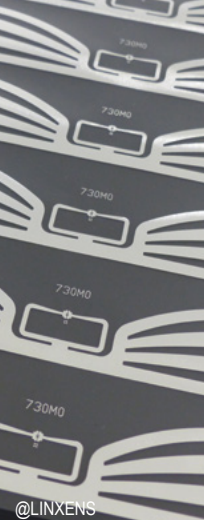
Hortense Gaya holds a Master's degree in Mechanical Engineering from the Engineering High School ENSMM in Besançon, France, and a Master of science from the Karlsruhe University of Applied Sciences in Germany. She has been working for the CCI Eurolam Group since 2013, starting her career in Germany and then moving back to the HQ in France where she assumed the role of Product Manager and then BU Manager for the printed electronics and thick film business. Her role consists in ensuring the successful development of electronics projects combining various inks, substrates and technologies from leading manufacturers such as Micromax, Piezotech, Solamet, CHASM, Coveme as well as Dupont Liveo for Silicone adhesive and dry electrodes.



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**Anna Gräbner, Aziz Orfia & Luis Miranda**  
Co-founder  
EYECAP'

Anna Gräbner, Luis Miranda, and Aziz Orfia, graduated of the Bachelor's degree in *Économie d'Entreprise* from the Haute École de Gestion de Genève (HEG-Genève), are the founders of Eyecap'. Eyecap' was initiated in 2021 during their third-year course, and after their studies, the project was incubated at -Pulse, HES-SO incubator of projects. During their time at -Pulse, the team had the opportunity to meet Dr. Delphine Bechevet, an associate professor at HEPIA, who has been assisting them in their technology research. Since the beginning of 2023, Eyecap' has been supported by Genilem.

**Anna Gräbner**

Co-founder of Eyecap', a project born in 2021, at the end of her studies at Geneva's HEG. With a background in medicine, hospitality and management, Anna Gräbner manages a medical and scientific innovation project called Genolier Innovation Hub.

**Aziz Orfia**

Co-founder of Eyecap', a project born in 2021, at the end of his studies at the HEG in Geneva. He is active in a number of associations, works for the City of Lausanne and is passionate about innovation. Eyecap' has enabled him to combine his interest in new technologies, a social commitment and entrepreneurship.

**Luis Miranda**

Co-founder of Eyecap', a project born in 2021, at the end of his studies at the HEG in Geneva. As an assistant at the HEG in Sustainable Management, Eyecap' enables him to reconcile his interest in sustainability with a social, technological and entrepreneurial project.



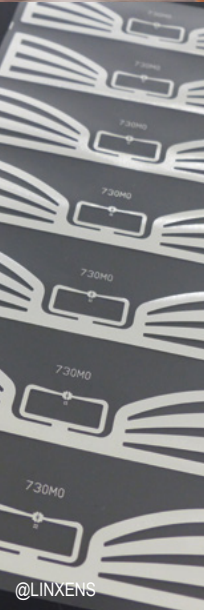
**Fabrice Domingues Dos Santos,**  
CEO Arkema-Piezotech  
ARKEMA, Greater Paris Metropolitan Region

Dr Fabrice Domingues Dos Santos received the diploma of engineer of Physics and Chemistry from the ESPCI (Physic & Chemistry school of Paris) and a PhD degree from Pierre & Marie Curie University, Paris, in polymer Science. He joined Arkema a world leader in specialty chemicals where he worked as a scientist and as a research director. Since 2010 he is president of Arkema-Piezotech, specialized in the design and development of electroactive polymers. Fabrice Domingues Dos Santos authored more than 100 publications and patents, mostly in the field of electroactive fluorinated polymers.



**Dr Danick Briand,**  
EPFL,  
Neuchâtel

Danick Briand received his Ph.D. degree in the field of microsystems for gas sensing from the Institute of Microtechnology (IMT), University of Neuchâtel, Switzerland in 2001. He is currently the team leader of the MEMS and Printed Microsystems group at the Soft Transducers Laboratory (LMTS) from the Ecole Polytechnique Fédérale de Lausanne (EPFL). He has been awarded the Euroensors Fellowship in 2010 for his pioneer work on flexible and printed sensors. He has been author or co-author on more than 275 papers published in scientific journals and conference proceedings. His research interests include MEMS, digital manufacturing of smart systems, soft microsystems technologies, and sustainable electronics.



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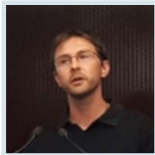
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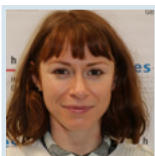
**Dr Med Mathieu Saubade,**  
CHUV,  
Lausanne



**Francois Germain,**  
Medical & Sensor Business Development Manager,  
LINUXENS, Lyon

*François Germain is an Electronic Engineer. With 12 year's experience in the Flexible Printed Circuit industry, he has been working in China, UK and France. He joined Linxens in 2018 as a Product marketing manager, then have been appointed Business Development for the Healthcare market.*

*He is now handling the existing Healthcare customers and supporting the new opportunities in the 3 Healthcare segments of Linxens which are the Biosensor and Diagnostic, the Track and Trace authentication, and the Stick to Skin wearable. His expertise allows his customer to design innovative and fully customized medical device and consumable.*



**Marie-Anais Petit,**  
Teaching assistant at  
HEPIA-HEdS Geneva and PHD Student at EPFL

*Marie-Anais Petit first obtained her medical imaging technologist degree in Strasbourg (France) in 2012. She joined Telecom Physique Strasbourg engineering school right after, and enrolled in "ICT for healthcare" section, a co-op program that allowed her to work part-time in the CIC-IT of Nancy (France), a translational research laboratory focused on MRI developments. After her graduation, she worked as application engineer in RS2D, a company that builds and sells preclinical MRI systems. After 3 years, she left the company to travel and improve her English level. When she came back, she decided to start a PhD program in MRI realm and joined the university of applied sciences of western Switzerland where she started a collaborative PhD program between health science and engineering faculties of Geneva, and Fresnel institute of Marseille (France). Her project focuses on coil development embedding advanced electronic technics as printed electronic and metamaterial, for low field MRI ( $\leq 0.1T$ ) improvement.*



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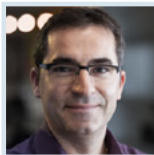
**Ludovic Serex,**  
CTO & Co-Founder, research and development of medical devices  
Neurosoft Bioelectronics, Geneva

Ludovic Serex graduated with a MSc in Microengineering from EPFL in 2014. He then started a PhD in Microelectronics at EPFL, where he focused on the development of microfluidic based dispensing tool for 3D bioprinting applications. During his PhD, Ludovic was also working as a consultant at CERN for the development of microfluidic based particle detectors. After graduating in 2019, Ludovic co-founded Neurosoft Bioelectronics, where he acts as COO and manufacturing manager. In addition to setting up a medical grade manufacturing line for the production of neural implants, he was actively involved in establishing a Quality management system and has been managing regulatory affairs. H-index: 7 (404 citations).



**Dr Delphine Bechevet,**  
HES Associate Professor at  
HEPIA, Geneva

After engineering diploma in electronics for embedded systems from Grenoble-INP in 2002, Delphine explored during her PhD works first steps of printed electronics, on plastics and papers, specially for antenna in UHF and SHF bands. She highlighted a way to achieve efficient small antennas (for RFID applications). She worked on metamaterials and composite right-left handed materials designs to miniaturize them at UCLA Microwave Electronics Lab (Pr. Itoh). After receiving her PhD Degree in 2005, she worked at France Telecom R&D (ex- Orange Lab) in Grenoble to design multiband small antennas for first smartphones. Then she worked 7 years as engineer and Technical Leader for Wireless and Printed Electronics Team. From 2015 she acts as Associate Professor in CoRES (Communicating Reconfigurable Embedded Systems) Group at HEPIA. She develops project linked to antennas and printed electronics, lowtech, dedicated to biotechs and medtechs.

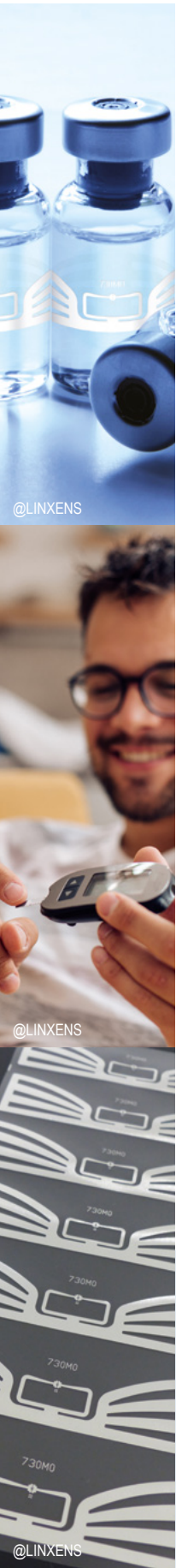
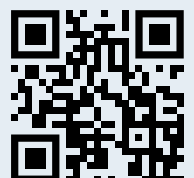


**Dr Gael Depres,**  
Senior Innovation and Grenoble R&D Center Manager,  
FEDRIGONI, Greater Grenoble Metropolitan Area

Dr. Gael Depres received his MS Degree in Pulp and Paper in 1996 from GRENOBLE INP PAGORA and his Ph.D. in Process Engineering from INPG in France. He entered the group Arjowiggins in 1999 as a research Engineer and worked mainly on new products developments in the area of specialty papers, Fine Papers and Innovation. In 2019, he became R&D director for the group Arjowiggins and worked during many years on printing electronics and connected papers. Since 2023, he worked as Senior Innovation & Grenoble R&D Center Manager at Fedrigoni group, leading the development of smart labels and packaging and also on nanocellulose.

Gael Depres wrote several articles and participate in many conferences in the area of intelligent paper and holds more than 18 patents in the field of specialty papers, especially on printing electronics on paper.

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