

# From Nano to Micro Power Electronics And Packaging Workshop November 28<sup>th</sup>, 2024 Tours, France 15<sup>th</sup> Edition



## **TECHNICAL PROGRAM**

#### **Technical Committee:**

**Daniel ALQUIER TOURS University** France Co-chairman **ST Microelectronics Tours** Laurent BARREAU France Chairman ST Microelectronics Grenoble Co-chairman Stéphane BELLENGER France Lars BOETTCHER FRAUNHOFER Institute Germany Cyril BUTTAY AMPERE Laboratory France Jean-Luc DIOT **PRIVATE** France Franck DOSSEUL **MODULEUS** France Co-chairman **VIRGINIA TECH USA** Guo-Quan LU

8 h 30 Workshop package and badge distribution

9 h 00 Welcome and workshop program presentation

9 h 15 Keynote: Cooling of power semiconductor devices: a challenge for high performance electrical power converters – Stephane Azzopardi, Rabih Khazaka, Toni Youssef – Safran, France

10 h 05 Session 1: Designs, Applications & Reliability

10h 05 Impact of copper clip design on strains in power module packaging : a FEM analysis – Swan Abbes Moussa – CEA LETI, France

10 h 30 Coffee break / Table Top Exhibition and presentation

11 h 00 Session 1: Design, Applications & Reliability con't

- 11 h 00 Thermomechanical reliability of power modules bond wires undergoing power cycling Mohamed Boutaleb ST Microelectronics Tours, France
- **11 h 25** Overview of Si IPD technologies for power applications Mohamed Jatlaoui Murata, France
- **11 h 50** Method for early default detection in GaN-HEMT embedded PCB packaging Alonso Gutierrez Galeano CEA, France
- 12 h 15 Evaluation of breakdown in advanced molded substrates for power application package Enrico Bottaro ST Microelectronics Catania, Italy

### 12 h 40 Table Top Exhibition visit and Lunch (Buffet)

- 13 h 40 Session 2: Materials, Processes and Technologies
- 13 h 40 Next generation packaging materials for challenging AI and power electronics applications
   Anna Graf Resonac, Germany
- 14 h 05 Electrification & automotive power electronics: innovative high reliability solder materials Karthik Vijay – Indium, United Kingdom
- **14 h 30** An exploration of silver sinter paste stencil printing parameters and the influence on print quality Valentin Divay ST Microelectronics Munich, Germany
- **14 h 55** Material innovation for power module packaging Lawrence Chong Sumitomo, Singapore
- 15 h 20 Coffee break / Table Top Exhibition
- 15 h 50 Session 2: Materials, Processes and Technologies con't
- **15 h 50** Characteristics of silver sintering with silver resin hybrid structure as an alternative for high temperature lead solder Shintaroh Abe Tanaka, Japan
- **16 h 15** High precision capillary printing (HPCaP) for advanced interconnection and packaging solutions Achille Guitton Hummink, France
- **16 h 40** Large area sintering for module attach Thorsten Vehoff Heraeus, Germany
- 17 h 05 Closing
- 17 h 15 End of session

**List of exhibitors :** ACCELONIX, DIGITCONCEPT, ELEMCA, HEF Group, KYOCERA, MICRONOR, SERMA Microelectronics, CTS

Next to the workshop sessions of Thursday, November 28th, a social event will be organized to close the workshop day for which you need to register if you wish to attend:

- a visit of a wine cellar in Loire Valley. Departure from Greman's institute at 17h30
- a dinner in a gastronomic restaurant in Tours at 20h00



**Sponsors:** 

# From Nano to Macro Power Electronics and Packaging European Workshop

Thursday, November 28th, 2024

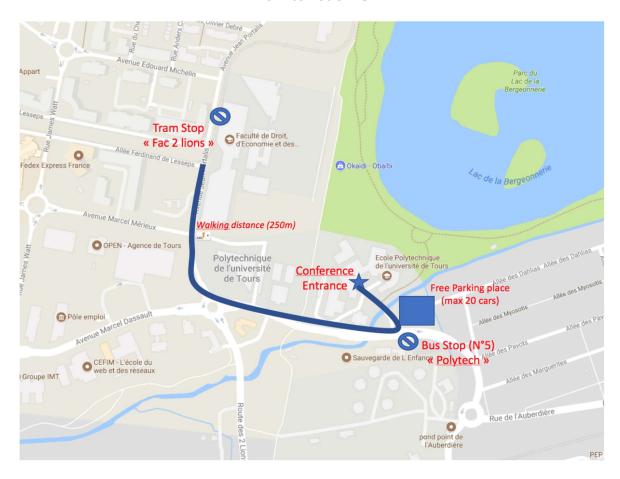
GREMAN (ECOLE D'INGENIEURS POLYTECH TOURS)
Amphithéâtre du département électronique et énergie 7 avenue Marcel Dassault Tours

Registration Form Final registration Thursday November 28<sup>h</sup> 2024

COMPANY:	
NAME:	FIRSTNAME:
ADDRESS:	
TEL:	E-MAIL:
→Send back to IMAPS France by E-mail: <u>imaps.france@orange.fr</u>	
FEES (including conferences attendance, table top visit, lunch, coffee breaks, social event and closing dinner)	
Conferences on free access on website www.imapsfrance.org after the event.	
□ IMAPS MEMBER 210 € HT - 252	! € TTC
□ Non IMAPS MEMBER 260 € HT – 312	2 € TTC
☐ SPEAKERS/CHAIRS 160 € HT - 192	! € TTC
For foreign companies, VAT is excluded	
Do not forget to tick boxes if you want to participate to our social event	
- Visit of a Touraine specific place (Th	ursday evening) □ yes □ no
- Dinner after the visit (Thursday even	ning) □ yes □ no
□ On line Payment and Registration available on www.france.imapseurope.org	
PAYMENT BANK REFERENCES  Credit card accepted, as well as payment by cheque, cash or wire transfer.  LCL VERSAILLES ST LOUIS IMAPS FRANCE BANK 30002 AGENCY 08948  ACCOUNT NUMBER 0000079088 G KEY 25 IBAN FR49 3000 2089 4800 0007 9088 G 25  BIC CRLYFRPP	

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### How to reach GREMAN



### Access by car from the A10 motorway

In the Paris-Bordeaux direction,

Take the exit n ° 22 Saint-Avertin, then follow the direction of the 2 Lions.

In the Bordeaux-Paris direction,

Take the exit n ° 23, follow the direction Tours-Center then the 2 Lions direction

### Access by train and tram or bus

You can either go to the Tours train station which is in the city center or to the Saint Pierre des Corps railway station which is on the outskirts and which has both rail shuttles to Tours and buses to different points of the city. More info on the website of Fil Bleu.

Access to Polytech Tours by tram stop "Fac 2 Lions" or by bus by line 5 stop "Polytech".