FRIGATES

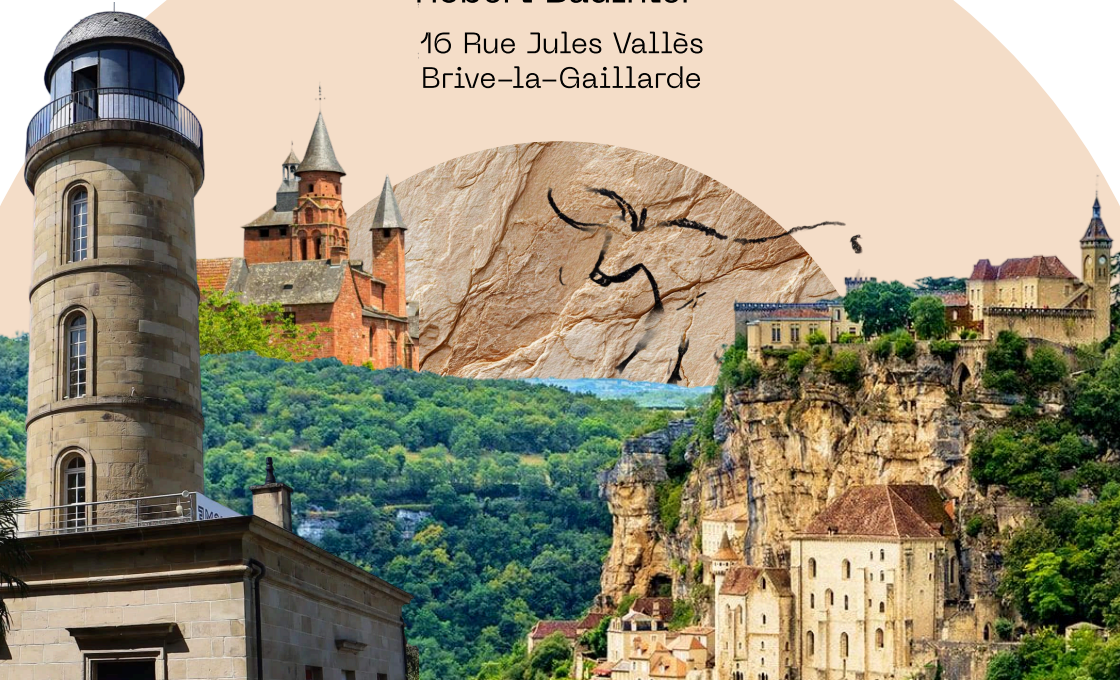
FRANCO-INDIAN RESEARCH BRIDGE WORKSHOP ON GaN HEMTS AND ELECTRONIC SWITCH

Program

7–9 July 2026

Campus Universitaire
Robert Badinter

16 Rue Jules Vallès
Brive-la-Gaillarde



Tuesday 7th July

Chair: Prof. NALLATAMBY Jean-Christophe		**Opening Session**
9h00-9h20	NALLATAMBY JC & DASGUPTA N.	Welcome Address
9h20-9h35	BLANQUET Véronique & OUAKED Said	Introduction to the franco-indian research bridge workshop of GaN HEMTs
9h35-9h50	ALLARD Olga	European and International Division Aid at the Institute for Engineering and Systems Sciences INSIS-CNRS
9h-50-10h05	BILA stéphane	Overview of research at Xlim
10h05-10h20	BARATAUD Denis & FABRE Frédéric	European Master for Industry in Microwave Electronics and Photonics (EMIMEP)
30-Minute	Coffee break with industrial partners	
Chair: Prof. DASGUPTA Nandita		**Emerging Horizons: Environmental Impacts on Immunity and Robustness in GaN Technology**
10h50-11h30	KAVERI Srini - Invited talk	Impact of changing environment on our immune system : Why this fuss?
11h30-11h50	BACQUE Ludovic	GaN technology for High Intensity Radiated Field applications (HIRF) applications:a new topology for improving the VSWR ruggedness
11h50-12h10	GATARD Emmanuel	Digital linearization of wideband doherty GaN Power Amplifier for 5G FR1 and new 6G applications
12h10-12h20	Poster Session	Poster Flash Talks
12h30-14h00	Lunch time	Poster Session
Chair: Prof. CHAKRAVORTY Anjan Co-chair: Dr. MARTIN Audrey		**Next-Gen Semiconductor Horizons: GaN and III-V Technologies for Defense and High-Frequency Power Applications**
14h00-14h20	MOUSSA Mohammad	Multi-Level GaN MMIC Supply Switches for Ka-Band Supply Modulated Power Amplifier
14h20-14h40	AUBRY Raphaël	Need for DEFENSE applications in III-V, GaN, and other wide bandgap technologies
14h40-15h00	KAKOU Charles & AL HAJJAR Ahmad	MESC III-V GaAs & GaN Technology Roadmaps for SATCOM: Enabling Next-Generation RF Performance from Ka- to W-Band
15h00-15h20	LEVENTOUX Margot	CW power and multitone linearity measurements of AlN/GaN HEMT using a passive load-pull setup in Ka band.
30-Minute	Coffee break with industrial partners	
Chair: Prof. NAIR Deleep Co-chair: Dr. PATRIACHE Gilles		**GaN Electronics: From Physics-Based Modeling to Circuit Integration and System Characterization**
15h50-16h10	DUTTA Gourab	Physics based compact Modeling of p-GaN Gate AlGaN/GaN HEMTs
16h10-16h30	PIOTROWICZ Stéphane	Overview of GaN activities at III-V Lab : From transistor to package amplifier
16h30-16h50	GUPTA Sayak Dutta	Monolithic e-mode GaN HEMT & Bidirectional Switch using d-mode GaN HEMTs
16h50-17h10	BLONDY Pierre	Integrated PCM Circuits for RF Applications
17h10-17h30	RIMLINGER Alain	How to measure amplifier linearity using EVM and ACPR on PNA-X
17h30-18h00	Violoncellist, PhD AZZAM Rayan	Be captivated by the Oriental melodies and Rayan's improvisational bowing.

Wednesday 8th July

Chair: Dr. SOMMET Raphaël Co-chair: Prof. GOSH Ruma		**Thermal Dynamics in GaN HEMTs: Characterization and Modeling Self-Heating in GaN HEMTs**
8h30-8h50	PARAMASIVAN Vigneshwara Raja	Field-Plate Influences on Electrothermal Properties of AlGaN/GaN HEMTs
8h50-9h10	BOUSSEKRI Mohammed	Coupled TCAD and 3D ANSYS Thermal Simulation for Hotspot Analysis in GaN HEMTs
9h10-9h30	STRENAER Raphaël	Time-resolved self-heating temperature measurements of GaN-based HEMTs using CeO2 Raman micro-thermometers
9h30-9h50	CHAKRAVORTY Anjan	SPICE modeling of peak temperature in GaN HEMTs
9h50-10h10	FLEURY Emilie	Correction of heat conduction using relativistic equation in HEMT GaN, multi-scale conduction impact and evidence of trap/thermal RF coupling
30-Minute	Coffee break with industrial partners	
Chair: Dr. PIOTROWICZ Stéphane / Co-chair: Prof. DUTTA Gourab		**From Device Physics to FOWLP Packaging: Advanced GaN HEMT Concepts and Circuit Architectures**
10h40-11h20	DASGUPTA Nandita - Invited talk	Enhancement-mode GaN HEMT – A Multi-pronged Approach at IIT Madras
11h20-11h40	DELTIMPLE Nathalie	Twisted Hybrid Coupler-Based dedicated to PA architectures in 150 nm GaN technology for 5G FR2 Applications
11h40-12h00	KUMARI Pallavi	Cross-Talk in C-Doped GaN HEMTs Induced by Two-Dimensional Hole Gas Conduction
12h00-12h20	PETIT Tao	Modeling Methods for GaN Circuits in FOWLP Packages with Quantitative Model Validation
12h30-14h00	Lunch time	Poster Session
Chair: Prof. DELTIMPLE Nathalie Co-chair Dr. BOUYSSE Philippe		**Power and RF GaN: From New RF Horizons to Advanced Measurement Techniques Insights**
14h00-14h20	DI GIACOMO BRUNEL Valéria	New horizon for GaN RF technologies
14h20-14h40	BEN HAMMOU Lyes	Device-Level Linearity characterization of mmWave GaN HEMTs: Trapping Mitigation and Two-Tone Active Load-Pull at 40 GHz
14h40-15h00	BEAUDOIN Laurent	Power Electronics: Which Probe for Which Measurement
15h00-15h20	HALLEPEE Clément	Time-Domain Measurements of GaN Amplifier driven by M-QAM modulated carrier generator
30-Minute	Coffee break with industrial partners	
Chair: Prof. DASGUPTA Amitava		**From Device to Network: Innovations in RF Metrology, Simulation, and GaN Technology**
15h50-16h10	HAMOUCHI El Gali	Simulating Nonlinear Circuits with Pseudo-Random Modulated Signals: Harmonic Balance for EVM Analysis.
16h10-16h30	LESECQ Marie	ScAlN/GaN-on-Si (111) HEMTs for RF applications
16h30-16h50	PASSERIEUX Damien	RF-Net: the French academic network of Radio Frequency Metrology Platforms
17h00-18h00	**Chair: Dr LECLERC Eric**	**How do we ensure across the RF/microwave value chain measurement coherence from wafer to system: shared challenges and responsibilities**
18h15	**Gala Dinner "Le Maraicher"**	**Collonges-la-Rouge**

Thursday 9th July

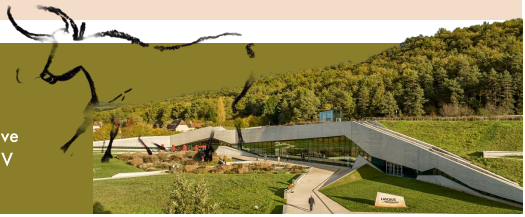
Chair: Prof. PARAMASIVAN Vigneshwara Raja Co-chair: Dr. MEDREL Pierre		From GaN Device Physics to mmWave Power Amplifiers for 5G Applications
8h30-8h50	AMINAJIA TAZIFUA Bertus	Investigation of traps in surface treatment configurations of Fe-doped InAlN/GaN HEMT transistors.
8h50-9h10	MOLLA Gobezie	Design of a GaN MMIC power amplifier for 5G MIMO applications in the FR2 band
9h10-9h30	MOKRANE Saib	Design of a 5W,28–32GHz Doherty Power Amplifier Using 150–nm GaN Technology for 5G NR FR2 mmWave Communications
20-Minute	Coffee break with industrial partners	

Chair: Prof. DUTTA GUPTA Sayak Co-chair: Dr. LESECQ Marie		Expanding GaN Horizons: From Advanced Material Characterization to Deep Learning and Healthcare Sensors
9h50-10h10	SOMMET Raphaël	Advanced Measurement Techniques and Comprehensive Analysis of Trapping and Thermal Effects in GaN-Based HEMTs
10h10-10h30	PATRIACHE Gilles	Structural and chemical study of ohmic contacts on GaN and AlGaN layers
10h30-10h50	ROUSSEAU Sébastien	Deep Learning Modeling for GaN HEMTs
10h50-11h10	GOSH Ruma	Sensors for Healthcare Monitoring and Role of GaN in it
11h10-11h20	NALLATAMBY Jean-Christophe	Closing Address
11h20-12h20	Lunch time	

Afternoon Social Event

Departure for Lascaux IV : 12h30

The International Cave Art Center Lascaux IV



Poster Session – Lunch time

SILVA DOS SANTOS José	A comparison of linearity figures of merit using two passive load-pull setups
KAKOU Luc	Structural and chemical study of ohmic contacts on GaN and AlGaN layers
LECOEUR Lucas	Deep Learning Modeling for GaN HEMTs
WOLDE Messeret	Sensors for Healthcare Monitoring and Role of GaN in it
PASSERIEUX Damien	RF-Net: the French academic network of Radio Frequency Metrology Platforms
GAILLARD Florent	XLIM Brive: Advanced Measurement and Testing Facility

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