

ADVANCE PROGRAM

1998 GaAs REL Workshop

SUNDAY NOVEMBER 1, 1998, Preceding the GaAs IC SYMPOSIUM
Room: Spanish Level 7, Westin Peachtree Plaza, Atlanta, Georgia

SPONSORED BY JEDEC COMMITTEE JC-14.7, EIA, and in cooperation with the IEEE.

Registration (Cost of Workshop is \$80, make checks payable to EIA) **7:30 AM**

Welcome, Opening Remarks, Introductions, Start (Anthony Immorlica, Workshop Chairman) . . . **8:15 AM**

SESSION 1 - Qualification Methodologies (Sammy Kayali, Session Chair) **8:30-9:50 AM**

1. **The European Space Agency Approach to Known Good Die for Space.**
C. Lindsay, R. Conlon, and F. Garat, GEC Marconi & ESTEC.
2. **Updating the Navy's Parts Derating Requirements & Application Manual to Include GaAs-based components.** B. Stuffle and M. Harris, Naval Surface Warfare Center and Georgia Tech Research Institute.
3. **Low-Cost High-Performance DC Plus RF Accelerated Life-Test System.**
David Whitefield and Ravi Khanna, Alpha Industries.
4. **Process Reliability Qualification Experiences During a Fab Relocation.** W. Roesch, S. Bumgarner, L.O. Monaghan, T. Rubalacava, D. Riley, D. Cruse, and J. Cartwright, TriQuint Semiconductor.

SESSION 2 - Reliability Testing and Failure Mechanisms. (Bill Roesch, Chair) **10:10-11:30 AM**

1. **Sidgating Effect in Ion-Implanted GaAs Self-Aligned Gate MESFET MMICs.**
F. Gao, J. Chi, V. Kaper, and P. Ersland, M/A COM.
2. **Effects of Drain Current Kinks and Negative Gate Resistances on the Performance of HFET MMIC Power Amplifiers.** C. Wei and J. Hwang, Lehigh University.
3. **Life Testing of GaAs/AlGaAs Heterojunction Bipolar Transistors**
J. Mittereder, J. Roussos, and W. Anderson, Naval Research Laboratory.
4. **MMIC Capacitor Dielectric Reliability.**
H. Cramer, J. Oliver, and G. Dix, Northrop Grumman

SESSION 3 - Measurement Techniques & Device Simulation (Ken Russell, Chair) **1-2:20 PM**

1. **In-Situ Picosecond Measurements of InP and GaAs ICs Utilizing Photoconductive Sampling Probes.**
T. Weatherford, G. David, T. Yun, M. Crites, J. Whitaker, K. Jobe, E. Ledbetter, S. Meyer, M. Bustamante, S. Thomas, and K. Elliott, Naval Postgraduate School, University of Michigan, Hughes Space & Communications.
2. **Full Two-dimensional Electroluminescent Analysis of GaAs/AlGaAs HBTs.**
M. Harris, B. Wagner, S. Halpern, M. Dobbs, C. Pagel, B. Stuffle, J. Henderson, and K. Johnson, Georgia Tech Research Institute & Naval Surface Warfare Center.
3. **2-D Device Numerical Simulations of Gate Sinking Failure Mechanism in pHEMT.**
V. Kaper, F. Gao, and P. Ersland, M/A COM.
4. **Thermal Impedance Computations using Realistic Power Dissipation Profiles.** R. Anholt, Gateway Modeling.

SESSION 4 - Hydrogen & Other Outgasing Effects (Wallace Anderson, Chair) **2:40-3:40 PM**

1. **Reliability of Al/Ti Gate AlGaAs/GaAs Power HFETs in Hydrogen Gas.**
R. Menozzi, R. Gaddi, F. Nava, C. Lanzieri, and C. Canali, University of Parma, University of Modena, Alenia.
2. **Utilizing Hydrogen Exposure to Design Reliable Gettered Packages.**
S. Adams, L. Shumway, J. Whitney, R. Wallace, P. Chao, and W. Hu, Sanders - A Lockheed Martin Co.
3. **The Effects of Epoxy Die Bonding on the Reliability of Pseudomorphic GaAs/InGaAs/AlGaAs HEMTs.**
C. Lindsay, R. Conlon, R. Davies, and A. Hall, GEC-Marconi & ESTEC.
4. **General Discussion - Late Papers** (Wallace Anderson, Technical Program Chairman) **4:00-5:00 PM**

Late Registration, as available, will be November 1, at the door prior to the Workshop