Jessica Claire
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Summary

Deep expertise in Semiconductors process and integration, Analog mixed-signal and RF environments with proficient device, modeling, design and simulation experience. Successfully technical leader support analog SPICE model libraries for product design teams in multiple locations of the USA. Successfully deliver and maintain PDK-based specs for analog & RF device layout with achievements in design enablement and robust quality systems.

Highlights

Perl, SKILL, Matlab, SKILL, C/C++, JMP and minitab to do data analysis etc..

Accomplishments

Experience

07/2004 to 01/2015
Staff engineer, Freescale â€“ , ,

- Analog device TCAD development and process integration Initiated 0.5um- 90nm analog technologies' loop closure reports to support many production yield improvement and ramp up in Freescale fabs around the world for MCU, NVM, LDMOS(RF), MEMS, power device, SiGe(Radar) and Analog Automotives products.
- Achievements are, Supporting and reviewing device structure layout for silicon-to-spice characterization Delivering and maintaining PDK-based specs for each device layout Tracking all advanced fab process for Device and modeling teams Data analyzing and scoring to identify gaps between PDK-based specs and silicon Collaborating with device & modeling teams to define and track closure of any gaps Defining score requirements for maturity levels and score triggers for device model updates Defining standard summary reports on process maturity, gaps, and closure actions for internal and external customer communication.

01/2001 to 06/2004
Senior engineer Olsson Associates â€“ , ,

- worked in Tianjin fab for 0.5um Analog technology transferring and ramp-up.
- And analog technology developing, worked TCAD, process integration, device Pcell code, device construction developing, verification, And worked on device SPICE model extraction, simulations etc..

01/1991 to 12/2000
Senior Engineer Olsson Associates â€“ , ,

- RF GaAs power amplifier fabrication, worked on device layout, device DC modeling, small signal modeling, large signal modeling, impedance matching network design and optimization, model simulation and verification etc..Achievements are,.
- C band 4-Watt and C band 8-Watt GaAs MESFET power amplifier for Tele-companies.

Education

Expected in 2000 to to
:
Xi'an Microelectronics Institute - ,
GPA:
Xi'an, Shaanxi, PRC, as a graduate student for semiconductor PHD degree
Expected in 1990 to to
MS Degree:
Shanghai Metallurgy Institute, CAS - Shanghai, PRC
GPA:
Expected in 1985 to to
B.S:
Physics Dept. of Jiangxi University - Jiangxi, PRC
GPA:
Personal capabilities Good team player, self-motivated and also positively take a challenge job.

Publications

Papers were published in IEEE publications, such as, Jessica Claire and Colin C. McAndrew, Robust Process Capability Index Tracking for Process Qualification, accepted by ICMTS 2015 as a presentation paper. Jessica Claire and Hong Chen, Robust FSL Fab Data Alignment with Technology Specs Approach, 2013 Test Methodology and Efficiency Symposium, April 23-25, 2013, Austin, TX, USA. Jessica Claire and Hong Chen, HV CMOS Orientated Variation-aware Layout and Robust Solution, Proceedings of 2011 9th International Conference on ASIC, Oct. 22-28, 2011, Xia-Men, China. Jessica Claire, et al, Loop Closure Variation Windows: Linking Manufacturing and Design, 2010 10th IEEE International Conference on Solid-State and Integrated Circuit Technology Proceedings, Nov.1-4, 2010. Jessica Claire, Statistical modeling based on back-end electric test data for improved IC process. Semiconductor Electronics, 2002. Proceedings. ICSE 2002. IEEE International Conference on, Dec. 19 - 21, 2002. 282 -286. Yifan Gao and Jessica Claire, An Improved Method of Microwave Power MESFET Modeling. 2005 Asia-Pacific Microwave Conference, Dec. 2005, 571-574 Jessica Claire and Youbao Liu, A new systematic optimization strategy for microwave power device modeling. Microwave and Optical Technology Letters. USA, 2000. 27(4): 269-273. Jessica Claire and Youbao Liu, An accurate Ids model for high power microwave GaAs MESFET devices. Power Electronics. 2000. 34(4): 60-61. Jessica Claire and Youbao Liu, Research of small signal equivalent circuit parameters for microwave power GaAs MESFET's. Journal of Microwave. 2000. 16(4): 399-406.

Jessica Claire and Y. F. Gao, A new approach to determining elements in a small-signal equivalent circuit of GaAs MESFET's using objective functions. Microelectronics, 2000. 30(1): 35-38. Jessica Claire et al, Processing technology for a 5-watt C-band multi-cell microwave GaAs MESFET and its Ids modeling. Microelectronics. 1999. 29(4): 267-271. Jessica Claire et al, Design and Fabrication Technique of C-band 8-Watt Power Device for GaAs MESFET. Microelectronics. 2001. 41(6): 301-307. Jessica Claire and Youbao Liu, 8-watt high efficiency narrow band power GaAs MESFET by synthesizing power technology. International Conference on Microwave and Millimeter Wave Technology Proceedings (Beijing, China), AuClairest 1998, pp. 112-115. Jessica Claire and Youbao Liu, Nonlinear modeling of 4W multi-cell microwave power GaAs MESFET. 1998 5th International Conference on Solid-state and Integrated Circuit Technology Proceedings (Beijing, China), October 1998, pp. 590-593. Jessica Claire and Youbao Liu, Fast and accurate extraction of parameters for Curtice & Statz GaAs MESFET models. 1999 ICCEA, pp.712-715. Jessica Claire and Youbao Liu, Approaches of extracting the small-signal parameters of microwave GaAs MESFET equivalent circuit. Microelectronics & Computer. 2000. 17(3): 35-39. Jessica Claire and Youbao Liu, A new method of determining the parameters of nonlinear modeling capacitance of Statz GaAs MESFET. Microelectronics & Computer. 2000. 17(5): 45-47. Jessica Claire and Youbao Liu, Design and Simulation of Inter-matching Network for GaAs MESFET Amplifiers using Pspice 5.0 Package. 11th National Semiconductor ICs & Silicon Materials' Symposium Proceedings. Sep. 1999, pp.611-613. Jessica Claire and Yifan Gao, Study of neural network models for microwave CAD design. 11th National Semiconductor ICs & Silicon Materials' Symposium Proceedings. Sep. 1999, pp.434-436.

Languages

English, Chinese

Skills

C, C++, Chinese, data analysis, DC, English, layout, Matlab, Radar, minitab, modeling, network design, optimization, Perl, PHD, self-motivated, simulation, team player