

33rd Working Group Bipolar (2021)

Member matters

Tommy Rosenbaum



Agenda

- › AKB overview
- › Introduction XFAB Paris
- › 2022 AKB location and date
- › Open discussion

Our topics

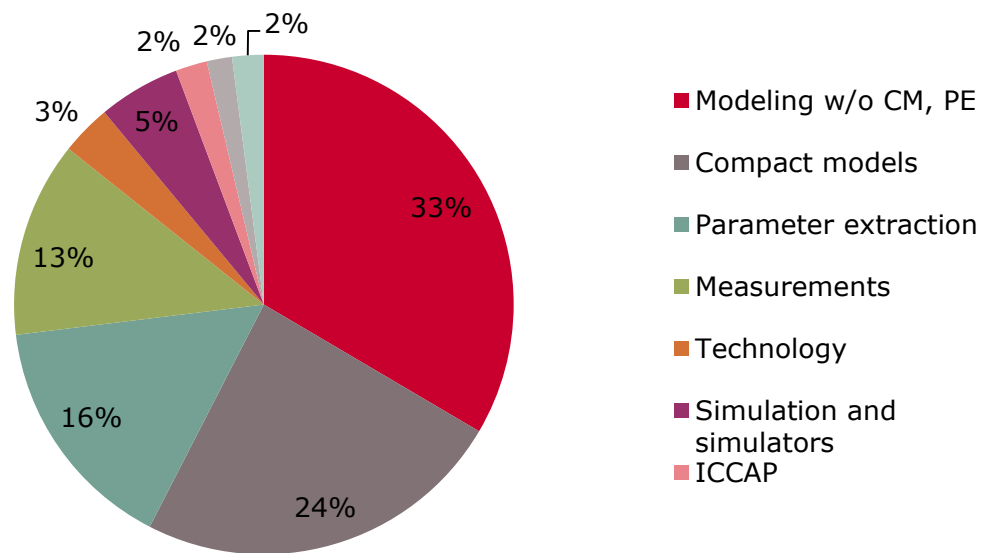
- › **Measurements:** techniques, de-embedding, hardware, driver
- › **Modeling:** compact models, parameter extraction methods and strategy (general or model specific), scaling, thermal, noise, breakdown, parasitics, ESD, MQA, statistics, stress, aging)
- › **Software for measurement and extraction:** ICCAP and other software, programs, transforms
- › **Simulation and simulators:** performance, model implementation problems, bugs
- › **Test structures:** design, evaluation
- › **Technology:** tendencies, new developments
- › **Others:** daily problems of the modeling work

Our statistics

- › Total unique presentations: **223** (years 1997-2020)
- › Presentations in the last years and today: 2017 (8), 2018 (10), 2019 (12)

- › Modeling topics (w/o CM, PE) include:

- MOS and bipolar modeling;
- passives;
- Statistics & QA;
- Parasitics;
- Thermal;
- Breakdown;
- Scaling;
- Strategy, Noise;
- Stress & Aging;
- ESD



Our members

	Company		Company
1	AdMOS	9	Intel
2	AMS	10	NXP Hamburg / Eindhoven
3	Analog Devices	11	Rohde & Schwarz
4	Bosch	12	SisConsult
5	FHWS	13	ST
6	IHP	14	TUD
7	IMS	15	XFAB
8	Infineon		



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BOSCH



The situation with COVID

- › The working group bipolar is normally a F2F meeting
 - Longer presentation slots: additional room for discussion
- › Cancellation in 2020
 - Decision based on pandemic situation and limited interest for a virtual session
 - IEEE EDS article
 - https://eds.ieee.org/images/files/newsletters/Newsletter_Apr20.pdf
- › This year: first time as a virtual workshop (intermediate solution only)
 - Personally, would like to go back to F2F mode *fingers crossed*
- › What is the future plan for the AKB?

Introduction XFAB Paris

- › See slides from Gregory

AKB past locations

- > AKB10, 1997: ALCATEL, Stuttgart
- > AKB11, 1998: TEMIC, Heilbronn
- > AKB12, 1999: Philips, Hamburg
- > AKB13, 2000: Infineon, Munich
- > AKB14, 2001: IHP, Frankfurt (Oder)
- > AKB15, 2002: Motorola, Berlin
- > AKB16, 2003: AMS, Unterpremstätten
- > AKB17, 2004: Atmel, Heilbronn
- > AKB18, 2005: Bosch, Reutlingen
- > AKB19, 2006: XFAB, Erfurt

- > AKB20, 2007: Infineon, Munich
- > AKB21, 2008: Hamburg, NXP
- > AKB22, 2009: FH Würzburg
- > AKB23, 2010: Crolles, ST
- > AKB24, 2011: Infineon, Munich
- > AKB25, 2012: Infineon, Munich
- > AKB26, 2013: IHP, Frankfurt (Oder)
- > AKB27, 2014: Crolles, ST
- > AKB28, 2015: AMS, Unterpremstätten
- > AKB29, 2016: Infineon, Munich
- > AKB30, 2017: XFAB, Erfurt
- > AKB31, 2018: AdMOS, Frickenhausen
- > AKB32, 2019: Crolles, ST
- > ~~AKB33, 2020: ☹~~
- > AKB33, 2021: Virtual ...

AKB past local organizers

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Sum	
AKB No.	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32		
IMS																								0	
TUD																									0
FH Trier																									0
Analog Dev																									0
SisConsult																									0
Intel																									0
XMOD																									0
R & S																									0
ALCATEL	1																								1
Freescall					1																				1
Bosch								1																	1
AdMOS																						1			1
FHW													1												1
XFAB										1												1			2
TEMIC		1						1																	2
NXP			1									1													2
IHP					1												1								2
AMS							1													1					2
ST														1				1					1		3
Infineon				1							1				1	1					1				5

AKB 2022 local organizer: R & S, Munich

Next AKB date and location

- › The 34th AKB will take place:
 - **where: Munich**
 - **when: 17th+18th November**
- › Other conferences in autumn:



2022 IEEE BiCMOS and Compound Semiconductor
Integrated Circuits and Technology Symposium (BCICTS)
Fort Lauderdale, FL USA
Abstract Submission Date: May 13, 2022

Oct 16, 2022 - Oct 20, 2022

2022 International Electron Devices Meeting (IEDM)
San Francisco, CA USA

Dec 2, 2022 - Dec 8, 2022

More on IEEE Electron Devices Society Calendar:

<https://eds.ieee.org/conferences/conferences-calendar>

Open discussion

Questions, proposals?



Part of your life. Part of tomorrow.

