

# List of Presentations

Greyed out presentations are not available.

## Session 1 - SPAD technologies and devices

R01.1	<u>J. Ogi</u> . <i>Recent Advances in SPAD Sensor Technology: Pixel Size Shrinking and PDE Enhancement.</i>
R01.2	<u>A. Gola</u> , F. Acerbi, A. Ficorella, S. Merzi, L. Parellada Monreal, E. Moretti, G. Paternoster, M. Penna, M. Ruzzarin, O. Marti Villareal, N. Zorzi. <i>FBK Roadmap Towards the Next-Generation of 3D-Integrated SiPM and SPAD Technologies.</i>
R01.3	<u>P. Coudrain</u> . <i>Rethinking boundaries: 3D integration &amp; Advanced Packaging as Performance Drivers.</i>
R01.4	<u>F. Gramuglia</u> , E. H. Toh, P. Zheng, Y. Sun, Y. T. Chow, D. Kandasamy, L. F. Tan, A. Zaka, V. Dhulla, S. Chwa, E. Quek. <i>A 55nm BCDLite® FSI SPAD with Improved NIR Sensitivity and DCR.</i>

## Session 2 - InGaAs/InP SPAD devices

R02.1	<u>F. Telesca</u> , F. Signorelli, L. Finazzi, E. Conca, A. Tosi. <i>Low-noise InGaAs/InP SPAD with Photon Detection Efficiency Exceeding 50% at 1550 nm.</i>
R02.2	<u>U. Karaca</u> , E. Kizilkan, C. Bruschini, E. Charbon. <i>10-<math>\mu</math>m InGaAsP/InP SPADs for 1064 nm Detection with 36% PDP and 118 ps Timing Jitter.</i>

## Session 3 - SPAD modeling

R03.1	<u>D. Rideau</u> , R. Helleboid, G. Mugny, I. Nicholson, A. Bianchi, D. Golanski, B. Mamdy, J-B. Kammerer, S. Rink, C. Lallement, B. Rae, W. Uhring, S. Pellegrini, M. Agnew, E. Lacombe, J.R. Manouvrier, M. Al-Rawhani. <i>Avalanche Build-up Field and its Impact on the SPAD Pulse Width and Inter-Pulse-Time Distributions.</i>
R03.2	<u>W. Uhring</u> , D. Lakeh, F. Calmon, A. Bianchi, D. Rideau, G. Gouget, A. Dartigues, R. Neri, F. Brun, S. Rink, J-B. Kammerer, J-B. Schell, C. Lallement, D. Goloanski, A. Juge, E. Lacombe. <i>Transient Measurements of Avalanche Dynamics and Quenching in SPADs.</i>

## Session 4 – Poster session #1

## Session 5 – LiDAR

R05.1	<u>S. Verghese</u> . <i>Lidar design considerations for self-driving cars.</i>
R05.2	<u>M. Itzler</u> . <i>Developing InP SWIR SPAD arrays for an Automotive Geiger-mode Lidar.</i>
R05.3	<u>I. Gyongy</u> , R. Zhang, G. Mora Martin, R. Henderson, G. Buller, A. Maccarone. <i>High-speed, Underwater 3D Imaging with an In-Pixel Histogramming SPAD.</i>
R05.4	S. Park, S.-H. Han, B.-J. Kim, J.-H. Chun, J. Choi, <u>S.-J. Kim</u> . <i>CMOS Flash LiDAR Sensors with In-pixel Zoom Histogramming TDC Architectures.</i>

R05.5	A. Nagai, C. Barry, S. Bellis, A. Browne, S. Buckley, E. Cashman, B. Coughlan, S. Foley, M. Perry. <i>Comparison of SPAD, SiPM and APD Performance for ToF LiDAR Application.</i>
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### Session 6 - Smartphone and edge computing

R06.1	P. Bonanno. <i>Physical and Cost Comparison of Smartphone Laser Autofocus Solutions.</i>
R06.2	R. Kappel, C. Mautner, G. Roehrer, J. Schwemmlin, M. Mayer, M. Arpa, P. Trattler, R. Fellner, S. Abovyan, T. Jessenig. <i>A Monolithic BSI Time-Of-Flight Sensor Supporting a Resolution of Up to 160x120 Pixels with On-Chip Data Processing Enabling Stand-Alone Or Sensor Fusion Applications.</i>
R06.3	L. Liu. <i>A New Vision Chip with SPAD Imaging and Spiking Neural Network Processing.</i>

### Session 7 – Poster session #2

### Session 8 - SPADs and photonic integrated circuits

R08.1	F. Acerbi, M. Bernard, A. Gola, G. Pucker, M. Ghulinyan. <i>Silicon SPAD Monolithically Integrated with Sion-Based Photonic Circuit.</i>
R08.2	G. Gualandi, F. Ceccarelli. <i>Direct Coupling of a Laser-Written Photonic Integrated Circuit to a SPAD Array.</i>

### Session 9 - Medical and quantum applications

R09.1	M. Tanner, A. Kufcsák, K. Ehrlich, E. Pedretti, E. McShane, H. Chandrasekharan, T. Craven, K. Dhaliwal, R. R. Thomson, R. H. Henderson. <i>Applications of Cmos SPAD Arrays in Clinical Imaging and Spectroscopy</i>
R09.2	B. Saft, A. Zimmer, M. Wiener, M. Skadell, E. Schäfer. <i>Enhancing Chemiluminescence-Detection With Dark-Count Rate Optimization Strategies for SPADs in Conventional CMOS Technologies.</i>
R09.3	A. Demuth, R. Camphausen, Á. Cuevas, I. Cusini, F. Madonini, F. Villa, A. Ruggeri, M. Gandola, L. Gasparini, A. Sansa Perna, M. Gräfe, F. Steinlechner, V. Pruneri. <i>Quantum imaging with SPAD array cameras.</i>

### Session 10 - Time to digital converters

R10.1	Y. Wang, H. Mai, Y. Wang, R. Henderson. <i>A PVT-Insensitive Body-Biased Time-to-Digital Converter in 28nm FD-SOI CMOS Technology.</i>
R10.2	G. Théberge-Dupuis, R. Scarpellini, T. Rossignol, N. Roy, G. Giroux, R. Giampaolo, S. Carrier, S. Charlebois, J.-F. Pratte. <i>Cascaded Vernier Time-to-Digital Converter: Toward Integration in an Array.</i>