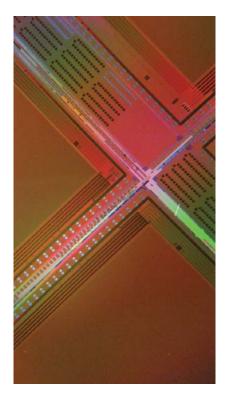


SMART IMAGING

DESIGN YOUR OWN IMAGE SENSORTO STAY AHEAD OF THE TREND



CREATE VALUE WITH LETI'S EXPERTISE IN SMART IMAGING

Imagers have entered a new era. Indeed, no longer confined to simply producing images, they are now required to be embedded with smart capabilities and overcome endless constraints. Leti combines know-how from a variety of disciplines, taking a unique co-design approach that simultaneously addresses sensors, readout circuits and image processing. The result is innovative solutions that cut across physics, electronics, and automation systems, ensuring that sensors benefit from nearby processing and embedded software. Moreover, they can dynamically adapt to scene characteristics, for instance with region-of-interest algorithms.

Leti's innovative solutions also support multi-sensor data-fusion techniques. These smart properties are crucial to producing low-power, multidimensional, and high value information. And because imagers are sometimes immersed in specific environments, Leti's smart-imaging teams are positioned to meet high-accuracy requirements.

Innovation comes from two directions:

- Architecture combining image acquisition and advanced processing for best image quality and/or features extraction
- Integrated circuit for ultimate imaging performance (ultra-low noise, low power, wide dynamic range, high frame rate, etc.)

LETI IMAGE SENSOR SOLUTIONS

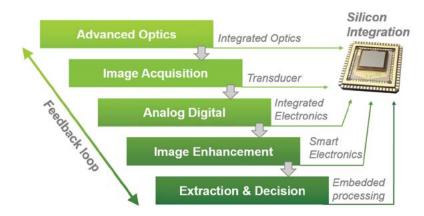
- Develop image sensor solutions and circuit architectures
- Add smart processing capabilities
- Ensure high accuracy

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• Guarantee robust performance in harsh environments

ACTIVITIES

- Architecture and electronic integrated circuit combining image acquisition and advanced processing for efficient solutions and high-level information extraction
- Integrated architecture for large-area circuits
- Integrated circuit for the ultimate performance in array topology (very high speed, ultra-low noise, ultra-low power consumption, high dynamic range, spatial resolution)
- Whole signal chain, from the transducer to electronic signal, analog-todigital conversion and data processing to derive a decision based on the smart acquisition
- Whole photonic spectrum (gamma, x-rays, UV, visible, infrared, terahertz, mm) in conjunction with the related applications (medical, non-destructive industrial control, consumer, security, defense, space, thermography, etc.)



Leti, technology research institute

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STATE-OF-THE-ART TOOLS & METHODOLOGY

- IC design flow, advanced CAD tools, industrial test platform
- Algorithm/architecture codesign and joint optimization methodology



INTERESTED IN THIS TECHNOLOGY?

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