

## ABSTRACT PRESENTATION

Title: SWIR – A Hitchhiker's Guide: Sipping Champagne Riding the Light Waves

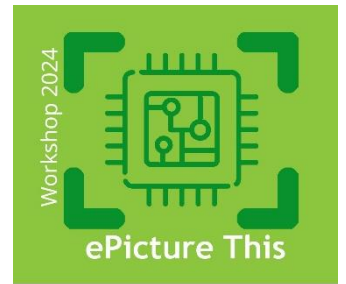
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In a world full of different light spectrums, Short-Wave Infrared (SWIR) shines bright as the newest party guest to the imaging field. Within the SWIR band between ~ 700 nm to 1700 nm, SWIR promises a clear vision of the “unseen”. Aptly named for its unique spot on the electromagnetic spectrum, SWIR's story goes far beyond just a name.

Join us for a technical deep-dive that promises to be both enlightening and entertaining.

For a fun connection, SWIR is also a famous musical album of ATL titled: *So-Wrong, It's Right!*.

As a tribute to this label, we decided to organize our presentation in the order of the songs.

1. **Wavelength Wonderland** : Discover the mysterious world of SWIR with the perfect opening track to set the tone for our adventure.
2. **Let It Roll** : From natural sources like the sun's rays to the man-made lights of lasers, SWIR keeps the party going. We'll roll through anecdotes and historical experiences that have shaped the SWIR landscape.
3. **Timeless Transistors** : In another timeline, continuation of the original Ge-based transistors may have led to SWIR-sensitive image sensors. Here, we'll take a detour to discuss how silicon technology has impacted imaging.
4. **The SWIR Ascension** : SWIR's applications have skyrocketed in recent years, from satellite imaging to medical diagnostics. We'll explore the growing interest, timeline, and challenges along the way.
5. **Metrology Melodies** : Let's tune in to semiconductor metrology and how SWIR plays a role in precise measurements. This track ties together the spectrum of SWIR applications with accuracy and precision.
6. **Front-End to Back-End Beats** : As we journey through the technology progress from Front-End of Line (FEOL) to Back-End of Line (BEOL), we'll experience SWIR's critical impact on tomorrow's tech.
7. **Champagne Finale** : Raise a glass as we conclude our journey with TUD's work on SWIR, making strides in innovation and technology. It's time to pop the bubbly and toast to a bright future on the SWIR waves.