I will discuss the applications of antimatter particles in a broad range from basic and applied research to beneficial use in humans. The antimatter particle under consideration is the anti-electron coined positrons. It is common understanding that matter and anti-matter were created equally during the big bang – well almost equally. While antimatter is detectable throughout the Milky Way galaxy, including on the Sun and on Earth, these particles are created currently. On Earth positrons are generated in accelerators, nuclear reactors and laboratories. Work with positrons has shed new light on atomic physics, solid state materials science and contributed to generating faster microprocessors. The focus will be on positrons’ interaction with matter and their detection and applications in semiconductor research. The bulk of the advances stem from the ability to find small spaces of emptiness within a vast near infinite amount of something. In addition, the opposite charge of positrons vs. electrons allows probing different areas in matter. I will walk through the amazing world of antimatter applications at a 30,000 ft level with more detailed illustrations on select topics.

The presentation will also reflect a long career in the vicinity of the unique and creative approaches by the late Kelvin G. Lynn.

Please meet our guest speaker and share in refreshments 3:45-4:10 p.m. in the foyer on floor G above the lecture hall