

The Hidden Power of Mathematics

Yi-Ming Huang

Taiwan Semiconductor Manufacturing Company, Ltd.

`ymhuang82@gmail.com`

Mathematics is often seen as an abstract discipline, but its impact extends beyond equations and theorems. In this talk, I will share my journey from mathematics, through statistics, to industry, reflecting on how mathematical thinking has shaped my problem-solving skills, decision-making, and career development. While I don't use advanced mathematics daily, the structured way of thinking I developed through my studies remains invaluable. I will also discuss key lessons learned along the way and advise mathematics freshmen and soon-to-be graduates as they prepare for their careers.

Additionally, I will highlight the crucial role of mathematics in machine learning and share concrete examples of how I have applied mathematical concepts to solve real-world problems. No matter where your career takes you, I hope this talk provides valuable insights into how mathematical training can be a powerful and versatile tool—even in unexpected ways.