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Education

2006 Ph.D. Photonic Engineering
University of Cambridge, United Kingdom.

2003 B.Eng. Electrical & Electronic Engineering
Nanyang Technological University, Singapore.

Academic Positions

2023–Present Area Coordinator
Quantitative Finance, Lee Kong Chian School of Business

2016–Present Academic Director
M.Sc. in Quantitative Finance, Lee Kong Chian School of Business

2017–Present Associate Professor of Quantitative Finance (Practice)
Singapore Management University

2018–2021 Faculty Advisory Committee for Teaching & Learning
Singapore Management University

2012–2017 Assistant Professor of Quantitative Finance (Practice)
Singapore Management University

Professional Positions

2019–Present Co-founder, Director, & Representative
Lucent Investment Associates

2019–Present Co-founder, Director & Portfolio Manager
Universal Trading Machine Laboratory (UTM Lab Funds VCC, AUM > US$100M)

2009–2012 Executive Director, Desk Strategist at Asia Macro Trading
Goldman Sachs (Hong Kong)

2006–2009 Associate, Quantitative Analyst at Fixed Income Division
Morgan Stanley (London)

Research Interests

Derivative Pricing Models

Risk Management & Hedging Strategies

High Frequency Trading Algorithms

AI, Machine Learning & Financial Applications

Portfolio Management

Market Micrstructure

Awards (Academic & Professional)

PREQIN APAC Hedge Funds League Table: #4 in Relative Value Fund Ranking, 2023.

Global Financial Market Review: Best Startup Quantitative Hedge Fund 2022.

SMU Dean's Post Graduate Teaching Honor List, 2019, 2020, 2021, 2022, 2023, 2024, 2025.

SMU Dean's Teaching Honor List, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025.

SMU Masters in Quantitative Finance Best Instructor Award 2025.

SMU Masters in Quantitative Finance Best Instructor Award 2024.

SMU Masters in Quantitative Finance Best Instructor Award 2023.

SMU Teaching Excellence in Postgraduate Professional Programmes Award 2022.

SMU LKCSB Masters in Quantitative Finance Best Instructor Award 2022.

26^{th} Securities and Financial Markets Conference Research Paper Award, 2018.

SMU LKCSB Dean's Impact Award, Singapore Management University, 2017.

SMU Teaching Excellence Award, Postgraduate Professional Programmes, 2017.

Journal of Financial Studies Best Paper Award, 2015.

SMU Most Promising Teacher Award, Centre for Teaching Excellence, 2014.

Fellow of Cambridge Commonwealth Trust, inducted 2005.

Cambridge Commonwealth Trust Scholar, 2004-2006.

Skills

Portfolio Management, Market Microstructure, Derivatives Markets, Financial Data Science.

Experienced Linux (RHEL/CentOS, Debian/Ubuntu/Mint) and Windows (7/8/10/11) programmer.

Proficient in C, C++, Python, R, LaTeX, Emacs, Emacs Lisp, Matlab, Octave.

Journal Publications

Quantitative Finance

Neo, P. L., Tee, C. W. (2023), "Tail Risk Hedging: The Search for Cheap Options", *Journal of Portfolio Management* **50** (1), pp. 106-119.

Choi, J. C., Kwak, M., Tee, C. W., Wang. Y. (2022), "A Black-Scholes User's Guide to the Bachelier Model", *Journal of Futures Markets* **42** (5), pp. 959-980.

Neo, P. L., Tee, C. W. (2021), "Volatility Timing under Low-Volatility Strategy", *Journal of Portfolio Management* **48** (1), pp. 133-146.

Tee, C. W., Kerkhof, J. (2021), "A Unified Market Model for Swaptions and Constant Maturity Swaps", *International Journal of Theoretical and Applied Finance* **24** (4), pp. 1-31.

Neo, P. L., Tee, C. W. (2019), "Swaption Portfolio Risk Management: Optimal Model Selection in Different Interest Rate Regimes", *Journal of Derivatives* **27** (2), pp. 81-107.

Tee, C. W., Ting, C. (2017), "Variance Risk Premiums of Commodity ETFs", *Journal of Futures Markets* **37** (5), pp. 452-472.

Tee, C. W., Huang, S., Lim, K. G. (2017), "Performance Control and Risk Calibration in the Black-Litterman Model", *Journal of Portfolio Management* **43** (3), pp. 126-135.

Tee, C. W., Ting, C. (2017), "Volume Information in Nikkei and TOPIX Futures Transactions", *Journal of Financial Studies* **4** (4), pp. 1–42.

Photonic Engineering

Lau, F. K., Tee, C. W., Zhao, X., Penty, R. V., White, I. H. (2007), "A Novel Intra-Cavity Lens Design for Compact High Efficiency Tapered Laser Diodes", *IEEE Photonic Technology Letters* **19** (4), pp. 203-205.

Tee, C. W., Williams, K. A., Penty, R. V., White, I. H. (2006), "Non-Critical Waveguide Alignment for Vertically-Coupled Microring using a Mode-Expanded Bus Architecture", *IEEE Photonic Technology Letters* **18** (20) pp. 2129-2131.

Tee, C. W., Williams, K. A., Penty, R. V., White, I. H. (2006), "Fabrication-Tolerant Active-Passive Integration Scheme for Vertically-Coupled Microring Resonators", *IEEE Journal of Selected Topics in Quantum Electronic* **(12)** (1), pp. 108-116.

Tee, C. W., Yu, S. F., Penty, R. V., White, I. H. (2005) "Transient Response of ARROW VCSELs", *IEEE Journal of Quantum Electronics* **41** (2), pp. 140-147.

Tee, C. W., Yu, S. F., Chen, N. S. (2004), "Transverse-leaky-mode Characteristics of ARROW VCSELs", *Journal of Lightwave Technology* **(22)** (7), pp. 1797-1804.

Chen, N. S., Yu, S. F., Tee, C. W. (2004) "Suppression of Polarization Switching in Birefringent Antiresonant Reflecting Optical Waveguide Vertical-Cavity Surface-Emitting Lasers", *IEEE Photonic Technology Letters* **16** (3), pp. 711-713.

Tee, C. W., Tan, C. C., Yu, S. F. (2003) "Design of Antiresonant-reflecting optical waveguide-type vertical-coupled surface-emitting lasers using transfer matrix method", *IEEE Photonic Technology Letters* **(15)** (9), pp. 1231-1233.

Tee, C. W., Yu, S. F. (2003) "Design and Analysis of Cylindrical Antiresonant Reflecting Optical Waveguide", *Journal of Lightwave Technology* **21** (12), pp. 3379-3386.

Working Papers

Neo, P. L., Tee, C. W. (2023-now) "Universal Return: How should investment returns be reported?"

Liu, P., Lo, H., Neo, P. L., Tee, C. W. (2023-now) "From Fragile to Robust: taming cointegration instability with Bayesian optimization".

International Conference Proceedings (Refereed)

Quantitative Finance

Tee, C. W., Velu, R., Zhou, Z. (2022), "Why commonality persists?", *Proceedings of the* 65^{th} *Meeting Euro Working Group for Commodities and Financial Modelling*, pp. 1-76, New York, United States.

Velu, R., Zhou, Z., Tee, C. W. (2019), "Biclustering via Mixtures of Regression Models", *Computational Science ICCS 2019, Lecture Notes in Computer Science* **11537**, pp. 533-549, Faro, Portugal.

Neo, P. L., Tee, C. W. (2018), "Managing swaption portfolio risk under different interest rate regimes", *Conference on the Theories and Practices of Securities and Financial Markets 2018*, pp. 1-31, Kaohsiung, Taiwan.

Velu, R., Zhou, Z., Tee, C. W. (2018), "Commonality: A longitudinal study", *Proceedings of the 26th Conference on the Theories and Practices of Securities and Financial Markets 2018*, pp. 1-34, Kaohsiung, Taiwan.

Tee, C. W., Ting, C. (2015), "Volume information in Nikkei and TOPIX futures transactions", *Conference on the Theories and Practices of Securities and Financial Markets 2015*, pp. 1-40, Kaohsiung, Taiwan.

Tee, C. W., Kerkhof, J. (2014), "A Payoff-Consistent Approach to Cash-Settled Swaptions and CMS Replication", *Bachelier Finance Society* 8^{th} *World Congress 2014*, Brussels, Belgium.

Photonic Engineering

Hamacher, M., Heidrich, H., Troppenz, U., Syvridis, D., Alexandropoulos, D., Mikroulis, S., Kapsalis, A., Tee, C. W., Williams, K. A. (2008) "Wafer-Bonded Active/Passive Vertically Coupled Microring Lasers", *Proceedings of SPIE, Integrated Optics: Devices, Materials, and Technologies XII*, **6896**, San Jose, United States.

Heidrich, H., Hamacher, H., Troppenz, U., Syvridis, D., Alexandrapoulos, D., Mikroulis, S., Tee, C. W. (2007) "Vertically Coupled GaInAsP/InP Microring Lasers Fabricated by using Full Wafer Bonding", *European Conference of Optics Communication (ECOC 2007)*, Berlin, Germany.

Hamacher, H., Troppenz, U., Heidrich, H., Dragoi, V., Kapsalis, A., Syvridis, D., Tee, C. W. (2007) "Vertically Coupled and Wafer-Bonded Microring Resonators on InP", *European Semiconductor Laser Workshop 2007*, Berlin, Germany.

Tee, C. W., Williams, K. A., Penty, R. V., White, I. H., Hamacher, M., Troppenz, U., Heidrich, H. (2007) "Vertically-Coupled Microring Laser Array for Dual-Wavelength Generation", *Conference of Laser and Electro-Optics (CLEO 2007)*, Baltimore, United States.

Tee, C. W., Williams, K. A., Penty, R. V., White, I. H. (2007) "Compact Vertically-Coupled Microring Laser Array Dual-Wavelength Source for Terahertz Mode Beating", *European Conference on Integrated Optics 2007*, Copenhagen, Denmark.

Tee, C. W., Lau, F. K., Zhao, X., Penty, R. V., White, I. H. (2006) "Focussed-Ion-Beam Post Processing Technology for Active Devices", by , *Proceedings of SPIE, Optoelectronic Materials and Devices* **6352**, Gwangju, South Korea.

Tee, C. W., Lau, F. K., Zhao, X., Wonfor, A., Penty, R. V., White, I. H. (2006) "Reduced Risk of Catastrophic Optical Mirror Damage in High Power Tapered Lasers using Intra-Cavity Divering Lens", *Proceedings of SPIE, Semiconductor Lasers and Laser Dynamics II* **6184** , Strasbourg, France.

Lau, F. K., Tee, C. W., Zhao, X., Wonfor, A., Williams, K. A., Penty, R. V., White, I. H. (2006) "Monolithic Integration of Collimating Fresnel Lens for Beam Quality Enhancement in Tapered High Power Laser Diode", *Proceedings of SPIE, High-Power Diode Laser Technology and Applications IV* **6104**, San Jose, United States.

Zhao, X., Lau, F. K., Tee, C. W., Wonfor, A., Williams, K. A., Penty, R. V., White, I. H. (2006) "A Novel Monolithic Beam Steering High Power Transmitter for Low Cost Free Space Optical Wireless Links", *Proceedings of SPIE, Free-Space Laser Communication Technologies XVIII*, **6105**, San Jose, United States.

Kusko, M., Alexandropoulos, D., Tee, C. W., Kapsalis, A., Cristea, D., Syvridis, D. (2005) "Numerical Analysis of Microring Resonator obtained by Wafer-Bonding Technology", *Proceedings of SPIE, Integrated Optics: Theory and Applications*, **5956**, Warsaw, Poland.

Tee, C. W., Lau, F. K., Kwok, C. H., Penty, R. V., White, I. H. (2007) "Monolithic Integrated 10th order Fresnel Lens design for Bean quality enhancement in tapered laser diode", *Proceedings of Conference of Laser and Electro-Optics (CLEO)*, Baltimore, United States.

Chu, Y., Thompson, M. G., Ingham, J. D., Tee, C. W., Lau, F. K., Penty, R. V., White, I. H. (2006) "10Gb/s Data Transmission and Surface Profiling of 980nm Quantum Dot VCSELs", *European Conference of Optics Communications (ECOC 2006)*, Cannes, France.

Tee, C. W., Williams, K. A., Penty, R. V., White, I. H., Hamacher, M., Troppenz, U., Heidrich, H. (2006) "Mode-Expanded Bus Architecture for Non-Sensitive Waveguide Alignment in Vertically-Coupled Microring", *European Conference of Optics Communications (ECOC 2006)*, Cannes, France.

Lau, F. K., Tee, C. W., Zhao, X., Penty, R. V., White, I. H. "Phase Correcting Element for Intra-Cavity Laser Beam Control", *Optical Fiber Communication Conference (OFC 2006)*, San Francisco, United States.

Tee, C. W., Lau, F. K., Zhao, X., Wonfor, A., Williams, K. A., Penty, R. V., White, I. H. (2005) "Ion Beam Post Processing of High Power Gain-Guided Tapered Laser for Beam Quality Enhancement", *Proceedings of European Semiconductor Laser Workshop 2005*, Glasgow, United Kingdom.

Tee, C. W., Zhao, X., Ingham, J. D., Penty, R. V., White, I. H. (2005) "Focusing Effect in Multimode Vertical Cavity Surface Emitting Lasers by Parallel Trenches Surface Profiling", *Proceedings of LEOS CLEO/Pacific Rim 2005*, pp. 286-288, Tokyo, Japan.

Tee, C. W., Williams, K. A., Penty, R. V., White, I. H. (2005) "Novel Regrowth-Free Vertical Active-Passive Integration Scheme with Improved Fabrication Tolerance", *Conference on Laser and Electro-Optics (CLEO 2005)*, Baltimore, United States.

Tee, C. W., Williams, K. A., Penty, R. V., White, I. H. (2005) "Fabrication-Tolerant Active-Passive Integration Scheme for Vertically-Coupled Microring Resonators", *European Conference on Integrated Optics (ECIO 2005)*, pp. 200-203, Grenoble, France.

Tee, C. W., Zhao, X., Ingham, J. D., Penty, R. V., White, I. H. (2005) "Application of Surface-Relief Technique to Low-Cost, Gain-Guided VCSELs for Enhanced Transverse Mode Control", *European Conference on Integrated Optics (ECIO 2005)*, pp. 462-465, Grenoble, France.

Tee, C. W., Zhao, X., Ingham, J. D., Penty, R. V., White, I. H. (2005) "Ion Beam Post Processing of Low Cost 850nm VCSELs for Transverse Mode Control", *Semiconductor and Integrated Optoelectronics (19th SIOE)*, Cardiff, United Kingdom.

Yow, C. K., Chai, Y. J., Tee, C. W., Mcdougall, R., Penty, R. V., White, I. H. (2004) "All-Optical Multi Wavelength Bypass-Exchange Switching using a Hybrid-Integrated Mach-Zehnder Switch", *European Conference on Optical Communication (30th ECOC)*, Stockholm, Sweden.

Tee, C. W., Yu, S. F., Penty, R. V., White, I. H. (2004) "Polarisation Mode Beating and Self-Sustained Pulsation in Optically Pumped Birefringent Vertical Cavity Surface Emitting Lasers", *Numerical Simulation of Optoelectronic Devices 2004*, pp. 61-62, Singapore.

Teaching

Masters

Credit Risk Models	Fixed Income Securities
Quantitative Trading Strategies	Analysis of Derivatives
Quantitative Methods and Statistics	Mathematics for Quants
Stochastic Modeling in Finance	Risk Analysis

Undergraduate

Real Analysis	Stochastic Finance
Probability and Finance Theory	Investment Statistics
Structure Finance	Structured Products Sales and Trading