


Contact Information	<p>Room 3209A Department of Physics Hong Kong University of Science and Technology Clear Water Bay, Hong Kong</p>	<p>[V] (+852) 6432 1949 [E] rstanuwijaya@connect.ust.hk [W] www.rstanuwijaya.net</p>
		<p>Digital CV: </p>
Research Interests	Optical metasurfaces, Photonic computing, Quantum optics, Nanolithography	
Education	<p><b>Hong Kong University of Science and Technology (HKUST)</b> Hong Kong</p> <p><i>Ph.D. (candidate) in Physics, (Advisors: Jensen Li &amp; Jingdi Zhang)</i> Since 2022</p> <p><i>B.Sc. in Physics and Computer Science (CGA: 3.7/4.3)</i> 2018-25</p>	
Publications	<p>[1] <u>Randy Stefan Tanuwijaya</u>, So Lap, Wai Chun Wong, Tailin Ain, Jingdi Zhang, Wing Yim Tam, and Jensen Li Metalens array for complex-valued optical discrete Fourier transform manuscript accepted, <i>Advanced Optical Material</i>, arXiv:2502.08770 (2025)</p> <p>[2] Jiawei Xi, <u>Randy Stefan Tanuwijaya</u>, Tan Li, and Jensen Li Optical Neural Networks with Intensity-Based Projection Layers as Effective Nonlinear Activations manuscript accepted, <i>Scientific Reports</i>, (2025)</p> <p>[3] <u>Randy Stefan Tanuwijaya</u>, Liang Hong, Jiawei Xi, Wai Chun Wong, Tsz Yung Kit, Wing Yim Tam, and Jensen Li Metasurface for programmable quantum algorithms with classical and quantum light <i>Nanophotonics</i> 13, 927–936 (2024)</p> <p>[4] Tsz Kit Yung, Jiawei Xi, Hong Liang, Kai Ming Lau, Wai Chun Wong, <u>Randy Stefan Tanuwijaya</u>, Fan Zhong, Hui Liu, Wing Yim Tam, and Jensen Li Polarization coincidence images from metasurfaces with HOM-type interference <i>iScience</i> 25, 104155 (2022)</p>	
Internship Experience	<ul style="list-style-type: none"> <li>○ <b>Fullstack Web Developer Intern</b>, Quokka HR June-August 2021 Develop frontend (Vue.js), backend (Flask), and maintain database (SQLAlchemy)</li> </ul>	
Open-Source Contributions	<ul style="list-style-type: none"> <li>○ <i>Zen Browser</i>, a firefox-based browser, <a href="https://github.com/zen-browser/desktop">github.com/zen-browser/desktop</a> Added a trigger to allow scrolling from the edge of the browser window #8461 Added a keybind to search for tabs #8272</li> <li>○ <i>Spliit</i>, Open-source expense manager, <a href="https://github.com/spliit-app/spliit">github.com/spliit-app/spliit</a> Weblate/translation for Bahasa Indonesia</li> </ul>	

Honors and Awards	○ Best Student Paper, The International Symposium of Plasmonics and Nanophotonics, NUS, Singapore	2025
	○ Best Teaching Assistant, Department of Physics, HKUST	2024
	○ <b>Hong Kong Postgraduate Fellowship Award</b> , Research Grants Council of Hong Kong	2022
	○ First Class Honors, HKUST	2022
	○ <b>SSCI Medalist Scholarship</b> , School of Science HKUST	2018
	○ <b>Silver Medal, Asian Physics Olympiad</b>	2018
	○ Bronze Medal, Indonesian National Physics Olympiad	2017
Presentations and Talks	○ <b>15th International Conference on Metamaterials, Photonic Crystals and Plasmonics</b> “Computing metalens array for programmable quantum algorithms and complex-to-complex discrete Fourier transform” Torremolinos, Spain, 26 July 2025	
	○ <b>The International Symposium on Plasmonics and Nanophotonics 2025</b> “Metalens array for programmable quantum algorithms and complex-valued optical computing” National University of Singapore, 17 February 2025	
	○ <b>13th International Conference on Metamaterials, Photonic Crystals and Plasmonics</b> “Optical matrix computation using programmable metalens array” Paris, France, 19 July 2023	
Teaching Duty	○ TA instructor for General Physics I PHYS 1112, HKUST (Fall 23)	
	○ TA instructor for Introductory Physics PHYS 1191, HKUST (Spring 24)	
	○ Supervising experimental projects for Capstone Research PHYS 4291, HKUST (Fall 24, Spring 25) Experiments: Superconductivity, Photolithography and device fabrication	
Undergraduate Research Projects	○ Optical and quantum metasurfaces, advisor: Jensen Li	2021-22
	○ All-optical neural network, advisor: Shengwang Du	2020-21
	○ Photonic microring resonator, advisor: Andrew Poon	2019-20
Technical Proficiency	Programming languages: <b>Wolfram Mathematica</b> , <b>Python</b> , <b>JS</b> , C++, Matlab, Java Simulation and experimental tool: Comsol Multiphysics, LabView Typewriting: Microsoft Office, LaTeX Illustration: Blender, Inkscape, GIMP Cloud computing and Hosting: <b>Cloudflare</b> , Hetzner Cloud, AWS Others: <b>Linux</b> , Docker, TrueNAS	
Languages	○ English, Professional Working proficiency ○ Chinese, Elementary proficiency ○ Indonesian, Native proficiency	
Extracurricular Services	○ <b>Undergraduate Hall Tutor</b> , UG Hall 1	Since 2022
	Organize social events, mentoring, and offer pastoral care and counseling to students	
	○ Student Peer Companion, HKUST Counseling and Wellness Center	Since 2023
	Volunteer in mental health campaigns and featured in promotional media	