

Wei Ting CHEN, Ph.D.

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Scholarly Profile

My research focuses on developing revolutionary flat optical devices for imaging and sensing applications. I have published 44 peer-reviewed journal papers in the fields of metasurfaces, nanophotonics and plasmonics. Most of them are highly cited with a total citation of more than 5,000 and H-index of 31.

Research Experience

- 2018 – present** **Research Associate**, Harvard University
Harvard John A. Paulson School of Engineering and Applied Sciences
Faculty Advisor: Prof. Federico Capasso
- 2015 – 2018** **Postdoctoral Researcher**, Harvard University
Harvard John A. Paulson School of Engineering and Applied Sciences
Faculty Advisor: Prof. Federico Capasso
- 2011 – 2012** **Visiting Researcher**, University of Southampton
Optoelectronics Research Centre
Faculty Advisor: Prof. Nikolay I. Zheludev

Education

- 2014** **Ph.D. in Applied Physics**, National Taiwan University
Thesis: Reflective plasmonic meta-surfaces for applications in meta-devices
(Graduated with Dean's Award)
Faculty Advisor: Prof. Din Ping Tsai
- 2011** **MSci. in Physics**, National Taiwan University
Thesis: Electromagnetic energy vortex associated with sub-wavelength plasmonic
Taiji marks (Graduated with Dean's Award)
Faculty Advisor: Prof. Din Ping Tsai
- 2008** **B.A. in Applied Physics**, National University of Kaohsiung

Publications

Forty-four peer-reviewed journal papers (total citations: 5031, h-index: 31, i10-index: 42, > 1,000 citations per year according to Google Scholar).

• Selected Publications

W. T. Chen, A. Y. Zhu, V. Sanjeev, M. Khorasaninejad, Z. Shi, E. Lee and F. Capasso, "A broadband achromatic metalens for focusing and imaging in the visible" *Nature Nanotechnology*, **13**, 220–226 (2018)

W. T. Chen, A. Y. Zhu, J. Sisler, Z. Bharwani and F. Capasso, "A broadband achromatic polarization-insensitive metalens consisting of anisotropic nanostructures" *Nature Communications* **10**, 355 (2019)

M. Khorasaninejad*, **W. T. Chen***, R. C. Devlin*, J. Oh, A. Y. Zhu and F. Capasso, "Meta-Lenses at Visible Wavelengths: Diffraction-Limited Focusing and Sub-Wavelength Resolution Imaging" *Science* **352**, 1190 (2016)

W. T. Chen, K.-Y. Yang, C.-M. Wang, Y.-W. Huang, G. Sun, I.-D. Chiang, C. Y. Liao, W.-L. Hsu, H. T. Lin, S. Sun, L. Zhou, A.-Q. Liu, D. P. Tsai, "High-efficiency broadband meta-hologram with polarization-controlled dual images" *Nano Letters* **14**, 225-230 (2014)

W. T. Chen, C. J. Chen, P. C. Wu, S. Sun, L. Zhou, G.-Y. Guo, C. T. Hsiao, K.-Y. Yang, N. I. Zheludev and D. P. Tsai, "Optical magnetic response in three-dimensional metamaterial of upright plasmonic meta-molecules" *Optics Express* **19**, 12837 (2011)

• **Published**

- [1] N. A. Rubin, G. D'Aversa, P. Chevalier, Z. Shi, **W. T. Chen**, F. Capasso, "Matrix Fourier optics enables a compact full-Stokes polarization camera" *Science*, **365**, 6448, eaax1839 (2019)
- [2] M. Decker, **W. T. Chen**, T. Nobis, A. Y. Zhu, M. Khorasaninejad, Z. Bharwani, F. Capasso, and J. Petschulat, "Imaging performance of polarization-insensitive metalenses" *ACS Photonics* **6**, 6, 1493-1499 (2019)
- [3] **W. T. Chen**, A. Y. Zhu, J. Sisler, Z. Bharwani and F. Capasso, "A broadband achromatic polarization-insensitive metalens consisting of anisotropic nanostructures" *Nature Communications* **10**, 355 (2019)
- [4] A. Y. Zhu, **W. T. Chen**, J. Sisler, K. M. A. Yousef, E. Lee, Y.-W. Huang, C.-W. Qiu and F. Capasso, "Compact Aberration-Corrected Spectrometers in the Visible Using Dispersion-Tailored Metasurfaces" *Advanced Optical Materials*, **7**, 1801144 (2019)
- [5] **W. T. Chen**, A. Y. Zhu, J. Sisler, Y.-W. Huang, K. M. A. Yousef, E. Lee, C.-W. Qiu and F. Capasso, "Broadband Achromatic Metasurface-Refractive Optics" *Nano Letters*, **18**, 12, 7801-7808 (2018)
- [6] **W. T. Chen**, A. Y. Zhu, V. Sanjeev, M. Khorasaninejad, Z. Shi, E. Lee and F. Capasso, "A broadband achromatic metalens for focusing and imaging in the visible" *Nature Nanotechnology*, **13**, 220–226 (2018)
- [7] A. Y. Zhu, **W. T. Chen**, A. Zaidi, Y.-W. Huang, M. Khorasaninejad, V. Sanjeev, C.-W. Qiu and F. Capasso, "Giant intrinsic chiro-optical activity in planar dielectric nanostructures" *Light: Science & Applications* **7**, e17158 (2018)
- [8] Z. Shi, M. Khorasaninejad, Y.-W. Huang, C. R. Cames, A. Y. Zhu, **W. T. Chen**, V. Sanjeev, Z.-W. Ding, M. Tamagnone, K. Chaudhary, R. C. Devlin, C.-W. Qiu and Federico Capasso, "Single-Layer Metasurface with Controllable Multiwavelength Functions" *Nano letters* **18**, 2420-2427 (2018)
- [9] P. C. Wu, C. Y. Liao, V. Savinov, T. L. Chung, **W. T. Chen**, Y.-W. Huang, P. R. Wu, Y.-H. Chen, A.-Q. Liu, N. I. Zheludev and Din Ping Tsai, "Optical anapole metamaterial" *ACS Nano* **12**, 1920-1927 (2018)
- [10] B. Groever, **W. T. Chen**, and F. Capasso, "Meta-Lens Doublet in the Visible Region" *Nano letters* **17**, 4902-4907 (2017)
- [11] **W. T. Chen**, A. Y. Zhu, M. Khorasaninejad, Z. Shi, V. Sanjeev, and F. Capasso, "Immersion Meta-Lenses at Visible Wavelengths for Nanoscale Imaging" *Nano letters* **17**, 3188-3194 (2017)
- [12] P. C. Wu, W.-Y. Tsai, **W. T. Chen**, Y.-W. Huang, T.-Y. Chen, J.-W. Chen, C. Y. Liao, C. H. Chu, G. Sun, and D. P. Tsai, "Versatile Polarization Generation with an Aluminum Plasmonic Metasurface" *Nano letters* **17**, 445-452 (2017)
- [13] M. Khorasaninejad, Z. Shi, **W. T. Chen**, V. Sanjeev, A. Zaidi, and F. Capasso, "Achromatic metalens over 60 nm bandwidth in the visible and metalens with reverse chromatic

- dispersion" *Nano letters* **17**, 1819-1824 (2017)
- [14] A. Y. Zhu*, **W. T. Chen***, M. Khorasaninejad, J. Oh, A. Zaidi, I. Mishra, R. C. Devlin, and F. Capasso, "Ultra-compact visible chiral spectrometer with meta-lenses" *APL Photonics* **2**, 036103 (2017) (*equal contribution)
- [15] J. W. Boley, K. Chaudhary, T. J. Ober, M. Khorasaninejad, **W. T. Chen**, E. Hanson, A. Kulkarni, J. Oh, J. Kim, L. K. Aagesen, A. Y. Zhu, F. Capasso, K. Thornton, P. V. Braun and J. A. Lewis "High operating temperature direct ink writing of mesoscale eutectic architectures" *Advanced Materials* **29**, 1604778 (2017)
- [16] M. Khorasaninejad, **W. T. Chen**, A. Y. Zhu, J. Oh, R. C. Devlin, D. Rousso, and F. Capasso, "Multispectral Chiral Imaging with a Meta-lens" *Nano letters* **16**, 4595-4600 (2017)
- [17] **W. T. Chen**, M. Khorasaninejad, A. Y. Zhu, J. Oh, R. Devlin, A. Zaidi and F. Capasso "Generation of wavelength-independent sub-wavelength Bessel beams using metasurfaces" *Light: Science & Applications* **6**, e16259 (2017)
- [18] M. Khorasaninejad, **W. T. Chen**, A. Y. Zhu, J. Oh, R. C. Devlin, C. Roques-Carmes, I. Mishra and F. Capasso "Visible wavelength planar metalenses" *IEEE Journal of Selected Topics in Quantum Electronics* **23**, 4700216 (2016) (Invited)
- [19] M. Khorasaninejad, A. Y. Zhu, C. Roques-Carmes, **W. T. Chen**, J. Oh, I. Mishra, R. C. Devlin and F. Capasso "Polarization-insensitive metalenses at visible wavelengths" *Nano Letters* **16**, 7229-7234 (2016)
- [20] M. Khorasaninejad*, **W. T. Chen***, R. C. Devlin*, J. Oh, A. Y. Zhu and F. Capasso, "Meta-Lenses at Visible Wavelengths: Diffraction-Limited Focusing and Sub-Wavelength Resolution Imaging" *Science* **352**, 1190 (2016) (*equal contribution) (Journal Cover)
- [21] R. C. Devlin, M. Khorasaninejad, **W. T. Chen**, J. Oh and F. Capasso "Broadband high-efficiency dielectric metasurfaces for the visible spectrum" *Processing of National Academy of Science* **113**, 10473-10478 (2016)
- [22] M. Khorasaninejad, **W. T. Chen**, J. Oh and F. Capasso, "Super-Dispersive Off-Axis Meta-Lenses for Compact High Resolution Spectroscopy" *Nano letters* **16**, 3732-3737 (2016)
- [23] **W. T. Chen**, P. Török, M. R. Foreman, C. Y. Liao, W.-Y. Tsai, P. R. Wu, and D. P. Tsai, "Integrated plasmonic metasurfaces for spectropolarimetry" *Nanotechnology* **27**, 224002 (2016)
- [24] T. A. Raybould, V. A. Fedotov, N. Papasimakis, I. Kuprov, I. J. Youngs, **W. T. Chen**, D. P. Tsai, and N. I. Zheludev, "Toroidal circular dichroism" *Phys. Rev. B* **94**, 035119 (2016)
- [25] J. B. Khurgin, G. Sun, **W. T. Chen**, W.-Y. Tsai, and D. P. Tsai, "Ultrafast Thermal Nonlinearity" *Scientific Reports* **5**, 17899 (2015)
- [26] W.-L. Hsu, P. C. Wu, J.-W. Chen, T.-Y. Chen, B. H. Cheng, **W. T. Chen**, Y.-W. Huang, C. Y. Liao, G. Sun, and D. P. Tsai, "Vertical split-ring resonator based anomalous beam steering with high extinction ratio" *Scientific Reports* **5**, 11226 (2015)
- [27] P. C. Wu, W.-L. Hsu, **W. T. Chen**, Y.-W. Huang, C. Y. Liao, A. Q. Liu, N. I. Zheludev, G. Sun, D. P. Tsai, "Plasmon coupling in vertical split-ring resonator metamolecules" *Scientific Reports* **5**, 9726 (2015)
- [28] Y. W. Huang, **W. T. Chen**, W.-Y. Tsai, P. C. Wu, C.-M. Wang, G. Sun, and D. P. Tsai, "Aluminum Plasmonic Multicolor Meta-Hologram" *Nano Letters* **15**, 3122-3127 (2015)
- [29] S.-C. Chen, Y.-J. Chen, **W. T. Chen**, Y.-T. Yen, T. S. Kao, T.-Y. Chuang, Y.-K. Liao, K.-H. Wu, A. Yabushita, T.-P. Hsieh, M. D. B. Charlton, D. P. Tsai, H.-C. Kuo, and Y.-L. Chueh, "Toward Omnidirectional Light Absorption by Plasmonic Effect for High-Efficiency Flexible Nonvacuum Cu(In,Ga)Se₂ Thin Film Solar Cells" *ACS Nano*, **8**, 9341-9348 (2014)
- [30] P. C. Wu, G. Sun, **W. T. Chen**, K.-Y. Yang, Y.-W. Huang, Y.-H. Chen, H. L. Huang, W.-L. Hsu, H. P. Chiang, D. P. Tsai, "Vertical split-ring resonator based nanoplasmonic sensor" *Applied Physics Letters* **105**, 033105 (2014)

- [31] **W. T. Chen**, K.-Y. Yang, C.-M. Wang, Y.-W. Huang, G. Sun, I.-D. Chiang, C. Y. Liao, W.-L. Hsu, H. T. Lin, S. Sun, L. Zhou, A.-Q. Liu, D. P. Tsai, "High-efficiency broadband meta-hologram with polarization-controlled dual images" *Nano Letters* **14**, 225-230 (2014)
- [32] **W. T. Chen**, M. L. Tseng, P. C. Wu, C. M. Chang, S. Sun, N.-N. Chu, L. Zhou, T.-J. Yen, D.-W. Huang, C. H. Lu, and D. P. Tsai, "Multilayered plasmonic resonant cavity manufactured by femtosecond laser-induced forward transfer technique" *Optics Express* **21**, 619 (2013)
- [33] Y.-W. Huang, **W. T. Chen**, P. C. Wu, V. Fedotov, N. I. Zheludev, and D. P. Tsai, "Toroidal Lasing Spaser" *Scientific Reports* **3**, 1237 (2013)
- [34] S. Sun, K.-Y. Yang, C.-M. Wang, T.-K. Juan, **W. T. Chen**, C. Y. Liao, Q. He, S. Xiao, W.-T. Kung, G.-Y. Guo, L. Zhou, and D. P. Tsai, "High-Efficiency Broadband Anomalous Reflection by Gradient Meta-Surfaces" *Nano Letters* **12**, 6223-6229 (2012)
- [35] T. T. Wu, Y. C. Syu, S. H. Wu, **W. T. Chen**, T. C. Lu, S. C. Wang, H. P. Chiang, and D. P. Tsai, "Sub-wavelength GaN-based membrane high contrast grating reflectors" *Optics Express* **20**, 20551-20557 (2012)
- [36] P. C. Wu, **W. T. Chen**, K.-Y. Yang, C. T. Hsiao, G. Sun, A. Q. Liu, N. I. Zheludev, and D. P. Tsai, "Magnetic plasmon induced transparency in three-dimensional metamolecules" *Nanophotonics* **1**, 131-138 (2012)
- [37] M. L. Tseng, P. C. Wu, S. Sun, C. M. Chang, **W. T. Chen**, C. H. Chu, P.-L. Chen, L. Zhou, D.-W. Huang, T.-J. Yen, and D. P. Tsai, "Fabrication of multilayer metamaterials by femtosecond laser-induced forward transfer technique" *Laser & Photonics Reviews* **6**, 702-707 (2012)
- [38] Y. Z. Ho, **W. T. Chen**, Y.-W. Huang, P. C. Wu, M. L. Tseng, Y. T. Wang, Y. F. Chau, D. P. Tsai, "Tunable plasmonic resonance arising from broken-symmetric silver nanobeads with dielectric cores" *Journal of Optics* **14** (11), 114010 (2012)
- [39] C. C. Chen, C. T. Hsiao, S. Sun, K.Y. Yang, P. C. Wu, **W. T. Chen**, Y. H. Tang, Y. F. Chau, E. Plum, G. Y. Guo, N. I. Zheludev, and D. P. Tsai, "Fabrication of three dimensional split ring resonators by stress-driven assembly method" *Optics Express* **20**, 9415 (2012)
- [40] Y. W. Huang, **W. T. Chen**, P. C. Wu, V. Fedotov, V. Savinov, Y. Z. Ho, Y.-F. Chau, N. I. Zheludev, and D. P. Tsai, "Design of plasmonic toroidal metamaterials at optical frequencies" *Optics Express* **20**, 1760 (2012)
- [41] E. Plum, K. Tanaka, **W. T. Chen**, V. A. Fedotov, D. P. Tsai, and N. I. Zheludev, "A combinatorial approach to metamaterials discovery" *Journal of Optics* **13**, 055102 (2011)
- [42] **W. T. Chen**, P. C. Wu, C. J. Chen, T.-J. Yen, C.-J. Weng, C.-H. Kuan, M. Mansuripur and D. P. Tsai, "Manipulation of multi-dimensional plasmonic spectra for information storage" *Applied Physics Letters* **98**, 171106 (2011)
- [43] **W. T. Chen**, C. J. Chen, P. C. Wu, S. Sun, L. Zhou, G.-Yu Guo, C. T. Hsiao, K.-Yu Yang, N. I. Zheludev and D. P. Tsai, "Optical magnetic response in three-dimensional metamaterial of upright plasmonic meta-molecules" *Optics Express* **19**, 12837 (2011)
- [44] **W. T. Chen**, P. C. Wu, C. J. Chen, H. Y. Chung, Y. F. Chau, C. H. Kuan, D. P. Tsai, "Electromagnetic energy vortex associated with sub-wavelength plasmonic Taiji marks" *Optics Express* **18**, 19665 (2010)

Press Coverage

- [1] **Achromatic Lens**
[Daily Mail](#), [Phys.org](#), [Harvard SEAS](#), [NBCNews](#), [Peta Pixel](#), [Photonics Online](#), [Mashable](#), [Xinhua](#), [The conversation](#), [Materials today](#), [Yahoo](#), [Newsweek](#), [ChemistryViews](#), [Azonano](#), [Technology Networks](#), [Space Daily](#), [The Inquisitr](#)
- [2] **Immersion Lens**
[Photonics Media](#), [Science Daily](#), [Phys.org](#)
- [3] **Planar Lens at Visible Wavelength**

[BBC](#), [Harvard Gazette](#), [Harvard SEAS](#), [YahooTech.](#), [SPIE News Room](#), [Physics World](#), [Nanotechnology World](#), [Photonics Media](#), [OPLI](#), [Popular Science](#), [Daily Mail](#), [News Max](#), [Digital Journal](#), [Peta Pixel](#)

- [4] **Multispectral Chiral Planar Lens**
[Harvard SEAS](#), [Photonics Media](#), [SPIE](#), [Laser Focus World](#), [Phys.org](#), [New Scientist](#), [Strait Times](#)
- [5] **Achromatic Planar Lens**
[Science Magazine](#), [Harvard SEAS](#), [Phys.org](#), [OSA OPN](#), [UPI](#), [OPLI](#), [Science Daily](#), [Photonics Online](#), [Photonics Media](#)
- [6] **Off Axis Metalenses for Compact Spectrometer**
[Science Magazine](#), [Nature Photonics](#), [AIP](#), [Laser Focus World](#), [Phys.org](#)
- [7] **Metamaterials Tailoring Reflection**
[Nature Photonics](#), [SPIE Newsroom](#)
- [8] **Meta-holograms**
[Phys.org](#), [Phys.org](#)
- [9] **Metamaterials: Split Ring Resonator**
[SPIE Newsroom](#), [SPIE Newsroom](#), [SPIE Newsroom](#)

Presentations

• **Invited Talks**

- [1] **W. T. Chen**, "Hybrid Achromatic Metasurface-Refractive Lenses" ZEMAX Envision, 2019
- [2] **W. T. Chen** and F. Capasso, "Dispersion-engineered and polarization-insensitive metasurfaces for broadband achromatic optics" CLEO, 2019
- [3] **W. T. Chen** and F. Capasso, "Metasurface aberration correctors for broadband achromatic refractive optics" SPIE Photonics West, 2019
- [4] **W. T. Chen** and F. Capasso, "Metasurface-enabled broadband achromatic optics" Nanotech Conference and Expo, 2019
- [5] **W. T. Chen** and F. Capasso, "Dispersion-engineered metasurfaces for broadband achromatic optics" IEEE MTT-S International Conference on Numerical Electromagnetic and Multiphysics Modeling and Optimization, 2019
- [6] **W. T. Chen**, A. Y. Zhu, J. Sisler and F. Capasso, "Dispersion-tailored metalenses and their applications" Meta18, 2018
- [7] **W. T. Chen**, A. Y. Zhu, V. Sanjeev, M. Khorasaninejad, Z. Shi, E. Lee and F. Capasso, "Broadband achromatic metalenses in the visible" Physics of Quantum Electronics, 2018
- [8] **W. T. Chen**, A. Y. Zhu, M. Khorasaninejad, Z. Shi, J. Oh, R. C. Devlin, F. Capasso, "Planar dielectric metasurfaces for immersion optics" SPIE Photonics West, 2017

• **Conference Talks**

- [1] **W. T. Chen** and F. Capasso, "Dispersion-engineered metasurfaces for broadband achromatic optics" IEEE Photonics Conference, 2019
- [2] **W. T. Chen**, Y. Ibrahim, A. Y. Zhu and F. Capasso, "Hybrid metasurface-refractive lenses" OSA Optical Fabrication and Testing, 2019
- [3] **W. T. Chen**, A. Y. Zhu and F. Capasso, "Engineering Metasurface Dispersion for Achromatic Optics" OSA FIO/LS, 2019
- [4] **W. T. Chen** and F. Capasso, "High Performance Flat Optics" OSA FIO/LS, 2018
- [5] **W. T. Chen**, M. Khorasaninejad, A. Y. Zhu, J. Oh, R. C. Devlin, A. Zaidi and Federico Capasso, "Meta-axicons for generating wavelength-independent sub-wavelength Bessel beams" SPIE Photonics West, 2017
- [6] **W. T. Chen**, M. Khorasaninejad, J. Oh and F. Capasso, "Super-Dispersive Off-Axis

Meta-Lenses for High Resolution Spectroscopy," OSA CLEO, 2016

- [7] **W. T. Chen**, Y.-W. Huang, P. C. Wu, C. Y. Liao, K.-Y. Yang, H.-T. Lin, V. Fedotov, G. Sun, S. Sun, L. Zhou, A. Q. Liu, N. I. Zheludev and D. P. Tsai, "Metamaterials: From 3D Plasmonic Nanostructure to Reflective Metasurface," JSAP Autumn Meeting, 2014, Japan
- [8] **W. T. Chen**, K.-Y. Yang, C.-M. Wang, Y.-W. Huang, G. Sun, I.-D. Chiang, C. Y. Liao, W.-L. Hsu, H. T. Lin, S. Sun, L. Zhou, A.-Q. Liu and D. P. Tsai, "Low-loss Plasmonic Meta-hologram," Optics & Photonics Taiwan, International Conference 2013, Taiwan
- [9] **W. T. Chen**, P. C. Wu, Y.-W. Huang, C. T. Hsiao, K.-Y. Yang, C. Y. Liao, V. Fedotov, V. Savinov, N. I. Zheludev, and D. P. Tsai, "3D metamaterials: Erected U-shaped nano-rings and plasmonic toroidal metamaterials at optical frequencies," E-MRS 2012, France
- [10] **W. T. Chen**, Y.-W. Huang, P. C. Wu, V. A. Fedotov, N. I. Zheludev, and D. P. Tsai, "Plasmonic lasing spacer associated with toroidal metamolecule at optical frequencies," JSAP-OSA Joint Symposia, 2012, Japan

- **Posters**

- [1] **W. T. Chen**, J. Sisler, A. Y. Zhu and Federico Capasso "Multifunctional metasurfaces with tailored dispersion" OSA FIO/LS 2019
- [2] **W. T. Chen**, Y.-W. Huang, K.-Y. Yang, M. L. Tseng, P. C. Wu, C. M. Chang "Fabrication of plasmonic functional metamaterials and its applications International, "Workshop Photonics of Functional Nanomaterials 2013," Hong Kong City University, China
- [3] **W. T. Chen**, C. Y. Liao, P. C. Wu, H. T. Lin, Y.-W. Huang, K.-Y. Yang, and D. P. Tsai, "Observing high-order resonance modes in plasmonic nanoring for Fano-resonance engineering," Annual Meeting of the Physics Society Republic of China 2013, Taiwan
- [4] Y.-W. Huang, **W. T. Chen**, P. C. Wu, Y.-F. Chau, D. P. Tsai, and N. I. Zheludev, "Plasmonic toroidal response at optical frequencies," IEEE iWEM 2011, Taiwan
- [5] **W. T. Chen**, P. C. Wu, C. J. Chen, C.-J. Weng, H.-C. Lee, T.-J. Yen, C.-H. Kuan, M. Mansuripur and D. P. Tsai, "Manipulation of multi-dimensional plasmonic spectra for information storage," ISOM/ODS'11, U.S.
- [6] **W. T. Chen**, E. Plum, K. Tanaka, V. A. Fedotov, D. P. Tsai, and N. I. Zheludev, "A combinatorial approach to metamaterials discovery," OPT 2010, Taiwan
- [7] **W. T. Chen**, P. C. Wu, C. J. Chen, M. Mansuripur and D. P. Tsai, "Plasmonic optical data storage," APDSC 2010, Taiwan
- [8] **W. T. Chen**, P. C. Wu, C. J. Chen, H. Y. Chung, Y. F. Chau, C. H. Kuan, D. P. Tsai, "Electromagnetic energy vortex associated with sub-wavelength plasmonic Taiji marks," NFO 11 2010, China
- [9] **W. T. Chen**, P. C. Wu, C. J. Chen, H. Y. Chung, Y. F. Chau, C. H. Kuan, D. P. Tsai, "Electromagnetic energy vortex associated with sub-wavelength plasmonic Taiji marks" The International Conference On Nanophotonics, 2010, Japan

Patents

- [1] M. Khorasaninejad, F. Capasso, **W. T. Chen**, J. Oh, "Super-dispersive off-axis meta-lenses for high resolution compact spectroscopy" WO 2018009258 A3
- [2] F. Capasso, **W. T. Chen**, R. C. Devlin, M. Khorasaninejad, J. Oh, A. Zhu, C. Roques-Carmes, I. Mishra, "Meta-lenses for sub-wavelength resolution imaging" WO 2017176921 A1
- [3] D. P. Tsai, Y.-W. Huang, **W. T. Chen**, C.-M. Wang, "Plasmonic multicolor meta-hologram" US 20170068214 A1

Teaching Experience

Project Advisor (2017 to present)

Mentored six undergrad intern students (Eric Lee, Jared Sisler, Kerolos Yousef, Yousef Ibrahim, Sophia Millay, Justin Marchioni)

Lecturer

Tutorial on metalens design and simulation at FIO/LS special event (2018), 50 attendees

Lecturer

Tutorial on metasurface design and simulation at CLEO special event (2018), 50 attendees

Teaching Assistance

Undergraduate physic laboratory, 60 students

Responsibilities: Lecturing/Lab demonstrations/tutoring, grading, exam grading

Awards

Fellowships

- "Postdoctoral Research Abroad Fellowship" Taiwan Ministry of Science and Technology (2015-2016)

Academic Recognition

- "Dean's Award for Ph.D degree", National Taiwan University, 2014
- "Best Poster Award", International Workshop Photonics of Functional Nanomaterials, Hong Kong, 2013
- "Best Student Paper Award", International Conference on Optics & Photonics in Taiwan, Taiwan, 2013
- "Outstanding Poster Award", Annual Meeting of the Physics Society Republic of China, Taiwan, 2013
- "Student Innovation Award", IEEE International Workshop on Electromagnetic, Taipei, Taiwan, 2011
- "Best Academic Paper Award" ISOM/ODS'11, U.S., 2011
- "Dean's Award for Master of Philosophy degree ", National Taiwan University, 2011
- "Student Paper Award", International Conference on Optics and Photonics in Taiwan, Taiwan, 2010
- "Outstanding Poster Award", Asia Pacific Data Storage Conference, Taiwan, 2010
- "Best Poster Paper Award", The International Conference on Nanophotonics 2010, Japan, 2010

Travel Awards

- JSAP student travel grant, JSAP-OSA Joint Symposia, 2012, 1,000 USD
- SPIE student travel grant, SPIE Optics + Photonics, 2008, 1,600 USD

Professional Service

- Reviewer for *Science*, *Materials Today*, *Science Advances*, *Laser and Photonics Reviews*, *Nature Communications*, *Light: Science and Applications*, *Advanced Science*, *Physics Review A*, *ACS Photonics*, *Advanced Optical Materials*, *Journal of Lightwave Technology*, *Optics Communications*, *Optics Express*, *Applied Optics* and *Optics Letters*
- Host of OSA incubator meeting entitled "Flat Optics: Recent Advances and Future Opportunities"
- Chair, OSA Photonic Metamaterials technical group (Jan, 2018 – present)
- Chapter President, SPIE National Taiwan University Student Chapter (2008 – 2009)

During my service, the chapter obtained NTU Excellent Chapter Award.

- Member of The Optical Society (OSA)
- Member of Society of Photo-Optical Instrumentation Engineers (SPIE)
- Member of The Institute of Electrical and Electronics Engineers (IEEE)
- Member of American Physical Society (APS)