Chen-Zhu Xie 谢尘竹

Portfolio:
Contact:
Scholar:
Personality: INTP AB

Education

Degree	Major	Credential (Outer)	Masterpiece (Inner)	Grad.
Doctor of Philosophy	Optical Engineering	Q.E. - Top 15%	Nonlinear Fourier Optics	2025 '27
Thesis - Analytic 3D vectorial linear non-uniform & nonlinear Fourier crystal optics in arbitrary $\bar{\bar{\varepsilon}}$, $\bar{\bar{\chi}}$ dielectrics				
Master 's Studies	Quantum Electronics	Courses Score - 93.5	THz (> 6G) OAM Source	2022 '24
Affiliation - **College** of Engineering and Applied Sciences, Nanjing **University**, No.163 Xianlin **Avenue**, Nanjing, Jiangsu, China				
Bachelor of Science	Applied Physics	GPA Rank - 1/400	DDTank Auxiliary Tools	2020 '22
Thesis - Research & design of nonlinear holography based on lithium niobate 3D nonlinear photonic crystal				
Freshman in College	Science	Sichuan Prov. - Top 2%	7 Notes ⟶ 3 Books	2016 '18
Affiliation - **School** of Physics, **College** of Science, Northeastern **University**, No.3-11 Wenhua **Road**, Shenyang, Liaoning, China				

Academic Focus

2024.06 **Next generation** high N.A. 3D vector non-uniform analytic linear & nonlinear Fourier crystal optics

2024.03 !Paraxial $k_0^{\omega} \Rightarrow$ **High N.A.** 3D vector non-uniform analytic linear & nonlinear Fourier crystal optics

2023.12 Emphasizing $G_{xyz}^{\omega} \Rightarrow$ **3D** vector non-uniform analytic linear & nonlinear Fourier crystal optics

2023.06 Involving $\bar{\bar{\chi}}_{\omega}^{(2)}$ anisotropy $\Rightarrow$ **Vector** non-uniform analytic linear & nonlinear Fourier crystal optics

2023.03 !Unitary $G_{\omega}^{\pm} \Leftarrow$!Hermitian $\bar{\bar{\varepsilon}}_{r}^{\omega} \Rightarrow$ **Non-uniform** analytic linear & nonlinear Fourier crystal optics

2022.09 Solution $\mathcal{F}\left[\boldsymbol{E}_{\omega}^{\pm}\right]$ to $\left(\nabla^2 + k_{\omega\pm}^2\right) \boldsymbol{E}_{\omega}^{\pm} \propto \boldsymbol{P}_{\omega\pm}^{(2)} \Leftrightarrow$ **Analytic** linear & nonlinear Fourier crystal optics

2022.06 Solution $\mathcal{F}\left[E_3\right] = \mathcal{F}\left[f\left(\mathcal{F}^{-1}\left[\cdot\right]\right)\right]$ to the Eq. below $\Leftrightarrow$ **Nonlinear** angular spectrum theory for SFG

2022.03 Solution $\mathcal{F}\left[E_3\right] = \iint\iint$ to $\left(\nabla^2 + k_3^2\right) E_3\left(\boldsymbol{r}\right) \propto P_3^{(2)}\left(\boldsymbol{r}\right) \Leftrightarrow$ **Nonlinear** convolution solution to SFG

Teaching

- **Head Teaching Assistant** at University Name — Spring 2019
  Course Name (COURSE CODE)
- **Teaching Assistant** at University Name — Spring 2017
  Course Name (COURSE CODE)

Skills

- **Skill Group:** List of technologies
- **Skill Group:** List of technologies
- **Skill Group:** List of technologies
- **Skill Group:** List of technologies

Languages

- **Language:** language proficiency level
  - **EXAM:** details
- **Language:** language proficiency level
- **Language:** language proficiency level

Projects

See full list of projects on example.com/projects

- Project Title (Technology Used, 2019)
  Short explanation of the project
- Project Title (Technology Used, 2019)
  Short explanation of the project

Honors & Awards

Academic Awards	Excellent Bachelar Dissertation	Northeastern University	2020.06
Honorary Titles	Excellent League Member 0.135	Northeastern University 0.855	2019.11 1

Honorary Titles

2019.11	Excellent League Member of	Northeastern University
2018.12	Excellent Undergraduate Student of	Northeastern University

Competition Awards

2019.11	Excellent League Member	Northeastern University
2018.06	Excellent Undergraduate Student	Northeastern University

Scholarships Fellowships

2019.04	JinChuan 1st scholarship - 5,000 rmb	Northeastern University
2018.06	1st scholarship - 2,000 rmb	Northeastern University

Extracurricular Activities

- Member at Some Club 2017–Current
  Detailed explanation of what you do at this club
- Member at Some Club 2016–2017
  Detailed explanation of what you do at this club
- Volunteer at Some Event Fall 2019
  Detailed explanation of what you do in this event
- Volunteer at Some Event Winter 2015
  Detailed explanation of what you do in this event