Chen-Zhu Xie 谢尘竹

Portfolio:
Contact:
Scholar:
Personality: INTP

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 $\mathcal{F}\left[E_\omega^\pm\right]$ to $\left(\nabla^2 + k_{\omega\pm}^2\right) E_\omega^\pm \propto P_{\omega\pm}^{(2)} \Leftrightarrow$ **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 $\mathcal{F}\left[E_3\right] = \iiint$ to $\left(\nabla^2 + k_3^2\right) E_3\left(r\right) \propto P_3^{(2)}\left(r\right) \Leftrightarrow$ **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

Academia	Doctor's Qualification Exam (Oral)	Excellent	Top 15%	Nanjing U.	
	Bachelar Dissertation & Defense	Excellent	1/90	Northeastern U.	2020.06
Competition	Three Provinces Achievement Expo	Attend	Leader	Three Prov.	2019.10
	"Challenge Cup" Tech Competition	Grand prize	Leader	Liaoning Prov.	2019.06
	Academic Scholarship	1st place	¥40,000	Nanjing U.	2020-24
	"Jinchuan" Scholarship	1st place	¥5,000	Northeastern U.	2019.04
	Academic Scholarship	1st place	¥2,000	Northeastern U.	2018.06
	Entrance Scholarship	3rd place	¥5,000	Leshan No.1 H.S.	2013.09
	Graduation with honor	Outstanding		Northeastern U.	2020.07
	League Member	Excellent		Northeastern U.	2019.11
	Undergraduate Student	Excellent		Northeastern U.	2018.12

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