## Chen-Zhu Xie

# 谢尘竹

Portfolio: 🗘 🔼 in

Contact:  $\mathbf{\Sigma}$ 

Scholar: D 🔻

Preference: 6

Personality: 1 INTP AB

## **EDUCATION**

Degree	Major	Credential (Outer)	Masterpiece (Inner)	Grad. 🕒		
Doctor of Philosophy	Optical Engineering	<b>Q.E.</b> - Top 15%	Nonlinear Fourier Optics 😯	2025 '27		
<b>Thesis</b> - Analytic 3D vectorial linear non-uniform & nonlinear Fourier crystal optics in arbitrary $\bar{\bar{\epsilon}}, \bar{\bar{\chi}}$ dielectrics $m{\Omega}$						
Master 's Studies	Quantum Electronics	Courses Score - 93.5 😱	THz (> 6G) OAM Source 😯	2022 '24		
Bachelor of Science	Applied Physics	<b>③</b> GPA Rank - 1/400 <b>⑤</b>	DDTank Auxiliary Tools D	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 Dhysics College of Science Northeastern University, No. 2, 11 Wenham Dead Shanyang Licening China						

L Affiliation - School of Physics, College of Science, Northeastern University, No.3-11 Wenhua Road, Shenyang, Liaoning, China L

## 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 $m{Q}$
2023.12	Emphasizing $G^\omega_{ ext{xyz}} \Rightarrow$ 3D vector non-uniform analytic linear & nonlinear Fourier crystal optics $m{Q}$
2023.06	Involving $\bar{\bar{\chi}}_{\omega}^{(2)}$ anisotropy $\Rightarrow$ <b>Vector</b> non-uniform analytic linear & nonlinear Fourier crystal optics $\Box$
2023.03	!Unitary $G^\pm_\omega \Leftarrow$ !Hermitian $ar{ar{arepsilon}}^\omega_{ m r} \Rightarrow $ Non-uniform analytic linear & nonlinear Fourier crystal optics $m{Q}$
2022.09	Solution $\mathcal{F}\left[\boldsymbol{E}_{\omega}^{\pm}\right]$ to $\left(\boldsymbol{\nabla}^{2}+k_{\omega\pm}^{2}\right)\boldsymbol{E}_{\omega}^{\pm}\propto\boldsymbol{P}_{\omega\pm}^{(2)}\Leftrightarrow$ Analytic linear & nonlinear Fourier crystal optics $\boldsymbol{Q}$
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 $\Leftrightarrow$ <b>Nonlinear</b> angular spectrum theory for SFG $\P$
2022.03	Solution $\mathcal{F}\left[E_{3}\right]=\iiint$ to $\left(\mathbf{\nabla}^{2}+k_{3}^{2}\right)E_{3}\left(\mathbf{r}\right)\propto P_{3}^{\left(2\right)}\left(\mathbf{r}\right)\Leftrightarrow$ <b>Nonlinear</b> convolution solution to SFG $\mathbf{Q}$

#### **TEACHING**

• Head Teaching Assistant at University Name

Course Name (COURSE CODE)

• Teaching Assistant at University Name

Course Name (COURSE CODE)

Spring 2019

Spring 2017

#### 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.	2024.01
	Bachelar Dissertation 🗘 & Defense 🕒	Excellent 🕠	1/90	Northeastern U.	2020.06
Competition	Three Provinces Achievement Expo	Exhibition 🕠	Leader	Three Prov.	2019.10
	"Challenge Cup" Tech Competition	Grand prize 🕥	Leader	Liaoning Prov.	2019.06
Scholarships & Fellowships	Academic Fellowship	1st class	¥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
Honors	Graduation with honor	Outstanding		Northeastern U.	2020.07
&	League Member	Excellent 😯		Northeastern U.	2019.11
Titles	Undergraduate Student	Excellent ()		Northeastern U.	2018.12
Memberships	Chinese Society for Optical Engineering	Member 🕠		Nanjing U.	2021-25
	"Qian Sanqiang" Talent Class	Head 🌐		I.H.E.P.	2017-21

#### 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	