## Chen-Zhu Xie

# 谢尘竹

Portfolio: 🗘 🔼 in

Contact:  $\mathbf{\Sigma}$   $\mathbb{X}$ 

Scholar: D 💯

Personality: 1 INTP AB

## **EDUCATION**

Degree	Major	Credential (Outer)	Masterpiece (Inner)	Grad. 🕒
Doctor of Philoso	phy Optical En	gineering <b>Q.E.</b> - Top 15%	Nonlinear Fourier Optics 🤇	27' 2025
L Thesis - Ana	lytic 3D vectorial line	ear non-uniform & nonlinear Four	rier crystal optics in arbitrary $ar{ar{arepsilon}},ar{ar{ar{ar{\chi}}}}$ diele	ectrics 🞧 🔟
Master 's Studies	Quantum Elect	tronics Courses Score - 93.5	THz ( $>$ 6G) OAM Source $\Box$	24' 2022
☐ Affiliation - Co	ollege of Engineering a	and Applied Sciences, Nanjing <b>Univer</b>	rsity, No.163 Xianlin Avenue, Nanjing, Jian	ıgsu, China 🔟
Bachelor of Scien	ce Applied Phy	ysics	🕥 DDTank Auxiliary Tools 🔼	22' 2020
L Thesis - Rese	earch & design of no	nlinear holography based on lithiu	ım niobate 3D nonlinear photonic cryst	tal 🞧 🔼
Freshman in Univ	versity Scien	sichuan Prov Top	$2\%   7   Notes \rightarrow 3   Books  ?$	18' 2016
☐ Affiliation - Sc	hool of Physics, Colle	ge of Science, Northeastern Universit	ty, No.3-11 Wenhua Road, Shenyang, Liaon	ning, China 🔟
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Degree	Majo	or Credential (Outer)	Masterpiece (Inner)	Grad. 🕒
Degree Doctor	Majo Optical Eng	,		Grad. ( <u>b</u> 27' 2025
Doctor	Optical Eng	ineering 0.E Top 15%		27' 2025
Doctor	Optical Eng	ineering 0.E Top 15%	Nonlinear Fourier Optics $\Box$ rier crystal optics in arbitrary $\bar{\bar{\varepsilon}}, \bar{\bar{\chi}}$ diele	27' 2025
Doctor  L Thesis - Ana Master	Optical Eng lytic 3D vectorial line Quantum Ele	ineering	Nonlinear Fourier Optics $\Box$ rier crystal optics in arbitrary $\bar{\bar{\varepsilon}}, \bar{\bar{\chi}}$ diele	27' 2025 ectrics <b>(7)</b>
Doctor  L Thesis - Ana Master	Optical Eng lytic 3D vectorial line Quantum Ele	ineering	Nonlinear Fourier Optics $\Box$ rier crystal optics in arbitrary $\bar{\varepsilon}, \bar{\bar{\chi}}$ diele THz (> 6G) OAM Source $\Box$	27' 2025 ectrics <b>(7)</b>
Doctor  L Thesis - Ana Master  L Affiliation - Co	Optical Eng lytic 3D vectorial line Quantum Ele ollege of Engineering a Applied P	ineering	Nonlinear Fourier Optics $\Box$ rier crystal optics in arbitrary $\bar{\bar{\varepsilon}}$ , $\bar{\bar{\chi}}$ diele THz (> 6G) OAM Source $\Box$ rsity, No.163 Xianlin Avenue, Nanjing, Jian	27' 2025 ectrics 🗘 🔟 24' 2022 egsu, China 🔟 22' 2020
Doctor  L Thesis - Ana Master  L Affiliation - Co	Optical Eng lytic 3D vectorial line Quantum Ele ollege of Engineering a Applied P	ineering	Nonlinear Fourier Optics $\Box$ rier crystal optics in arbitrary $\bar{\varepsilon}$ , $\bar{\bar{\chi}}$ dielectic THz (> 6G) OAM Source $\Box$ rierty, No.163 Xianlin Avenue, Nanjing, Jian DDTank Auxiliary Tools $\Box$ miobate 3D nonlinear photonic cryst	27' 2025 ectrics 🗘 🔟 24' 2022 egsu, China 🔟 22' 2020

## ACADEMIC FOCUS

Next generation high N.A. 3D vector non-uniform analytic linear & nonlinear Fourier crystal optics 📢	2024.06
93 Paraxial $k_0^\omega \Rightarrow  ext{ High N.A.}$ 3D vector non-uniform analytic linear & nonlinear Fourier crystal optics $oldsymbol{f Q}$	2024.03
12 Emphasizing $G^\omega_{ ext{xyz}} \Rightarrow$ 3D vector non-uniform analytic linear & nonlinear Fourier crystal optics $oldsymbol{\Omega}$	2023.12
Involving $\overset{\mathbb{Z}}{\chi}^{(2)}_\omega$ anisotropy $\Rightarrow$ <b>Vector</b> non-uniform analytic linear & nonlinear Fourier crystal optics $oldsymbol{\Omega}$	2023.06
103 !Unitary $G_{\omega}^{\pm} \Leftarrow$ !Hermitian $\bar{\bar{\varepsilon}}_{\mathrm{r}}^{\omega} \Rightarrow \mathbf{Non\text{-}uniform}$ analytic linear & nonlinear Fourier crystal optics $\mathbf{Q}$	2023.03
Solution $\mathcal{F}\left[m{E}_{\omega}^{\pm}\right]$ to $\left(m{\nabla}^2+k_{\omega\pm}^2\right)m{E}_{\omega}^{\pm}\proptom{P}_{\omega\pm}^{(2)}\Leftrightarrow$ Analytic linear & nonlinear Fourier crystal optics $m{\Omega}$	2022.09
Solution $\mathcal{F}[E_3] = \mathcal{F}[f(\mathcal{F}^{-1}[\cdot])]$ to the Eq. below $\Leftrightarrow$ <b>Nonlinear</b> angular spectrum theory for SFG $\bigcirc$	2022.06
O3 Solution $\mathcal{F}\left[E_{3}\right]=\iiint$ to $\left(\mathbf{\nabla}^{2}+k_{3}^{2}\right)E_{3}\left(r\right)\propto P_{3}^{\left(2\right)}\left(r\right)\Leftrightarrow$ <b>Nonlinear</b> convolution solution to SFG $\P$	2022.03

#### **TEACHING**

• Head Teaching Assistant at University Name

Spring 2019

Course Name (COURSE CODE)

• Teaching Assistant at University Name

Course Name (COURSE CODE)

Spring 2017

### Skills

• Skill Group: List of technologie
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• 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

Honorary Titles Lane © Excellent Bachelar Dissertation
© Excellent League Member
0.135

Northeastern University

Northeastern University

2019.11

2020.06

0.855

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	