# 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 ($> 6$G) 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 $\mathcal{F}[E_3] = \mathcal{F}\left[f\left(\mathcal{F}^{-1}[\cdot]\right)\right]$ to the Eq. below $\Leftrightarrow$ **Nonlinear** angular spectrum theory for SFG |
| 2022.03 | Solution $\mathcal{F}[E_3] = \iiint$ 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

| | | | |
|---|---|---|---|
| Academic Awards | Excellent Bachelar Dissertation | Northeastern University | 2020.06 |
| Honorary Titles | Excellent League Member | Northeastern University | 2019.11 |
| Lane | 0.135 | 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

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|---|---|---|
| 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*