李朝阳科研成果证明材料

1. 美国学习和工作期间

1. 参与国际（地区）合作与地区交流项目《宽带光矢量毫米波信号生成，光无线融合传输和外差相干探测研究》（批准号：61720106015, 金额：300万元）

本人贡献：1. 光纤通信系统里数字信号处理的机器人学习算法

1. 高速光纤通信系统中多载波调制和人工智能新技术

发表文章： 1. Feng Wang, **Chaoyang Li**, Jianjun Yu, “Physical Layer Encryption in IM/DD-OFDM Based on Multi-Scroll Chaotic System”, OFC 2020 （已发表）

2. Junjie Ding, Jiao Zhang, Miao Kong, **Chaoyang Li**, and Jianjun Yu, “Transmission of Hybrid Probabilistically and Geometrically Shaped 128QAM at 10-Gbaud in a 11-GHz Spacing WDM System”, 待发表

3. Junjie Ding, Jiao Zhang, , **Chaoyang Li** and Jianjun Yu, “Comparison of Geometrically - Shaped 32-QAM and Probabilistically -Shaped 32-QAM in a Bandwidth- Limited IM-DD System”, IEEE/OSA Journal of Lightwave Technology，待发表

B. 创立full-view coverage理论解析模型，和探测和自愈算法

发表文章：

1. ***Chaoyang Li****,* Anu G. Bourgeois. “Lifetime and Full-View Coverage Guarantees Through Distributed Algorithms in Camera Sensor Networks”, 22th IEEE Workshop on Dependable Parallel, Distributed and Network-Centric Systems (IEEE DPDNS 2017).
2. ***Chaoyang Li****,* Andrew Rosen, Anu G. Bourgeois. **“**On Camera Sensor Density Minimization Problem for Triangular lattice-Based Deployment in Full-View Covered Camera Sensor Networks”. 2016 2nd IEEE International Conference on Computer and Communications.
3. ***Chaoyang Li***, Andrew Rosen, Anu G. Bourgeois. **“**On k-Full-View Coverage Algorithms in Camera Sensor Networks”. 2016 2nd IEEE International Conference on Computer and Communications.
4. ***Chaoyang Li****,* Andrew Rosen, Caroline Johnson, Anu G. Bourgeois. **“**Full-View Coverage Holes Detection and Healing Solutions”. 2016 2nd IEEE International Conference on Computer and Communications.

C. 光网络方面从事路由解析，频谱分配：

发表文章：C4. Yang Wang, Hung Nguyen, **Chaoyang Li**. “Resolving Routing and

Spectrum Allocation with Optimal Revenue Problem in Spectrum-Sliced Elastic Optical Path Networks”, 2018 IEEE 39th Sarnoff Symposium.

C5. Yang Wang, Hung Nguyen, **Chaoyang Li**. “On the RSA Problem in SLICE Networks: A Novel Relaxation and Decomposition Approach”. 2018 27th International Conference on Computer Communication and Networks (ICCCN).

1. 北邮学习和工作期间，主要从事[光纤通信](https://baike.baidu.com/item/%E5%85%89%E7%BA%A4%E9%80%9A%E4%BF%A1" \t "https://baike.baidu.com/item/_blank)研究。
2. 参与国家 863项目《光孤子传输技术研究》
3. 作为主要完成人，参与863项目《高速光纤通信系统中偏振模色散补

偿的研究》，以及国家自然科学基金项目《高速光纤通信系统中偏振模色散自动补偿技术的研究》

C. 参与国家自然科学基金项目《光子晶体光纤及其在量子通信中应用的研究》

发表文章：

C6. ***Chaoyang Li****,* Anu G. Bourgeois. “Lifetime and Full-View Coverage Guarantees Through Distributed Algorithms in Camera Sensor Networks”, 22th IEEE Workshop on Dependable Parallel, Distributed and Network-Centric Systems (IEEE DPDNS 2017).

C7. ***Chaoyang Li****,* Andrew Rosen, Anu G. Bourgeois. **“**On Camera Sensor Density Minimization Problem for Triangular lattice-Based Deployment in Full-View Covered Camera Sensor Networks”. 2016 2nd IEEE International Conference on Computer and Communications.

C8. ***Chaoyang Li***, Andrew Rosen, Anu G. Bourgeois. **“**On k-Full-View Coverage Algorithms in Camera Sensor Networks”. 2016 2nd IEEE International Conference on Computer and Communications.

C9. ***Chaoyang Li****,* Andrew Rosen, Caroline Johnson, Anu G. Bourgeois. **“**Full-View Coverage Holes Detection and Healing Solutions”. 2016 2nd IEEE International Conference on Computer and Communications.

J1. ***Li Chaoyang*** , Yu Li , Yang Bojun,”Design of Photonic Crystal Fiber Using Full Vector Finite Element Method”, Journal of Optoelectronics ·Laser, Vol. 18, No. 1, pp.30-35, 2007.

J2. ***Li Chaoyang*** , Zheng yuan , Yang Bojun, “Effect of Automatic Polarization Mode Dispersion Compensation on Bit Error Rate in 2. 5 Gb/ s Transmission System”, Chinese Journal of lasers, Vol. 33, No. 4, pp. 490-492, 2006.

J3. ***Li Chaoyang***, Zheng yuan ,” A Simple, Practical and Low-loss PMD Emulator”, High Technology Letters, Vol.13, No. 8, pp. 19-22, 2003.

J4. ***Li Chaoyang***, Zheng yuan , “[Automatic Polarization-mode Dispersion Compensation in 2.5Gbit/s Transmission](http://ilib.com.cn/A-gjstx98200306002.html)” , High Technology Letters, Vol. 13, No. 6, pp. 5-8, 2003.

J5. Liu Xiumin , ***Li Chaoyang,*** Li Ronghua , Yangbojun , Zhang Xiaoguang,” Polarization Mode Dispersion Measurement Using Sagnac Interferometer”, Chinese Journal of lasers, Vol. A29 , No. 5, pp. 455-458, 2002.

J6. Zheng yuan , ***Li Chaoyang*** , Yang Bojun, “Investigation on the Statistical Characteristics of Polarization Mode Dispersion”, Chinese Journal of lasers, Vol. A29 , No. 8, pp. 687-690, 2002.

J7. Zheng yuan , ***Li Chaoyang*** , Yang Bojun, “Impacts of Polarization Mode Dispersion on the Pulse Width in Linear Systems”, Chinese Journal of lasers, Vol. A29 , No. 10, pp. 901-904, 2002.

J8. Mao Bingcheng , ***Li Chaoyang ,*** Zhao Ronghua, “Measurement of Polarization Mode Dispersion of Optic Fiber Using Jone s Matrix Eigenanalysis”, Acta Electronic Sinica, Vol . 30, No. 3, pp. 442-443. 2002.