

(1) 部分代表性的科学研究成果

学术研究论文

- [1] Liying Tan, Wenhe Du, Jing Ma, Siyuan yu, Qiqi Han. Log-amplitude variance for a Gaussian-beam wave propagating through non-Kolmogorov turbulence. Opt. Exp.. 2010, 18(2): 451-462(影响因子: 3.880)
- [2] Liying Tan, Yuqiang Yang, Jing Ma, Jianjie Yu. Pointing and tracking errors due to localized deformation in intersatellite laser communication links. Opt. Express, 2008, 16(17):13372-13380 (影响因子: 3.880)
- [3] Tan Liying, Ma Jing, Wang Qi. The Imaging System of Wavelet Optics Described by the Gaussian Linear Frequency-modulate Complex Wavelet. JOSA A. March 2005.
- [4] Liying Tan, Wenhe Du, Jing Ma. Effect of the outer scale on the angle of arrival variance for free-space-laser beam corrugated by non-Kolmogorov turbulence. J. Russ. Laser Res.. 2009, 30(6): 557-564(影响因子: 0.628)
- [5] Liying Tan, Yuqiang Yang, Jing Ma, Guoxian Zheng. Influence of misalignment and aberrations on antenna received power in free-space laser communications. Opt. Engineering, 2009, 48(4): 033201(影响因子: 0.722)
- [6] Tan Liying, Ma Jing, Wang Qi, Ran Qiwen. Filtering Theory and Application of Wavelet Optics. Appl. Opt. 2001, 40(2):257-260
- [7] Tan Liying, Ma Jing, Wang Qi. Wavelet Transforming Characters of Lens. Appl. Opt. 2002, 41(2): 6182-6186
- [8] L. Y. Tan, J. J. Yu, J. Ma, Y. Q. Yang, M. Li, Y. J. Jiang, J. F. Liu, Q. Q. Han. Approach to Improve Beam Quality of Inter-Satellite Optical Communication System Based on Diffractive Optical Elements. Optics Express. 2009, 17(8): 6311-6319(影响因子: 3.880)
- [9] Liying Tan, Wenhe Du, Jing Ma, Siyuan yu, Qiqi Han. Log-amplitude variance for a Gaussian-beam wave propagating through non-Kolmogorov turbulence. Opt. Exp.. 2010, 18(2): 451~462(影响因子: 3.880)
- [10] Wenhe Du, Liying Tan, Jing Ma, Siyuan Yu, Yijun Jiang. Measurements of angle-of-arrival fluctuations over an 11.8 km urban path. Laser and Particle Beams. 2010, 28: 91~99(影响因子: 4.420)
- [11] Wenhe Du, Liying Tan, Jing Ma, Yijun Jiang. Temporal-frequency spectra for optical wave propagating through non-Kolmogorov turbulence. Opt. Exp.. 2010, 18(6): 5763~5775(影响因子: 3.880)

- [12] Qinglong Yang, Liying Tan, Jing Ma, et al. Analysis of Doppler-effect on satellite constellations with wavelength division multiplexing architectures. CHINESE OPTICS LETTERS. 2009, 7(1): 19-22(影响因子: 3.778)
- [13] Qinglong Yang, Liying Tan, Jing Ma, et al. Analysis of crosstalk in optical satellite networks with wavelength division multiplexing architectures. JOURNAL OF LIGHTWAVE TECHNOLOGY. 2010, 28(6): 931-938(影响因子: 2.736)
- [14] Qinglong Yang, Liying Tan, Jing Ma, et al. Celestial background noise analysis for laser intersatellite links. APPLIED OPTICS. 2008, 47(32): 6103-6111(影响因子: 1.763)
- [15] Yuqiang Yang, Liying Tan, Jing Ma. Pointing and tracking errors due to localized deformation induced by transmission-type antenna in intersatellite laser communication links. Appl. Opt., 2009, 48(4):786-791(影响因子: 1.763)
- [16] Yuqiang Yang, Liying Tan, Jing Ma, Jianjie Yu. Effects of localized deformation induced by reflector antenna on received power. Opt. Comm., 2009, 282(3):396-400(影响因子: 1.552)
- [17] Qinglong Yang, Liying Tan, Jing Ma, et al. Doppler characterization of laser intersatellite links for optical LEO satellite constellations. OPTICS COMMUNICATIONS. 2009, 282(17): 3547-3552(影响因子: 1.552)
- [18] Yijun Jiang, Jing Ma, Liying Tan, Siyuan Yu, Wenhe Du. Measurement of Optical Intensity Fluctuation over an 11.8 km Turbulent Path. Optics Express. 2008, 16(10): 6963~6973(影响因子: 3.880)
- [19] Jing Ma, Yijun Jiang, Liying Tan, Siyuan Yu, Wenhe Du. Influence of Beam Wander on Bit-error Rate in a Ground-to-Satellite Laser Uplink Communication System. Optics Letters. 2008, 33(22): 2611~2613(影响因子: 3.772)
- [20] J. Ma, M. Li, L. Y. Tan, Y. P. Zhou, S. Y. Yu and Q. W. Ran. Experimental Investigation of Radiation Effect on Erbium-Ytterbium Co-Doped Fiber Amplifier for Space Optical Communication in Low-Dose Radiation Environment. Optics Express. 2009, 17(18): 15571-15577(影响因子: 3.880)
- [21] Jing Ma, Fang Zhao, Liying Tan, Siyuan Yu, and Qiqi Han. Plane wave coupling into single-mode fiber in the presence of random angular jitter. Appl. Opt. 2009, 48(27): 5184-5189(影响因子: 1.763)
- [22] Jing Ma, Fang Zhao, Liying Tan, Siyuan Yu, and Qiqi Han. Plane wave coupling into single-mode fiber in the presence of random angular jitter. Appl. Opt. 2009,

48(27): 5184-5189(影响因子: 1.763)

- [23] Wenhe Du, Siyuan Yu, Liying Tan, Jing Ma, Yijun Jiang, Wanqing Xie. Angle-of-arrival fluctuations for wave propagation through non-Kolmogorov turbulence. *Opt. Commun.*. 2009, 282: 705~708(影响因子: 1.552)
- [24] Wenhe Du, Siyuan Yu, Liying Tan, Jing Ma, Yijun Jiang, Wanqing Xie. Angle-of-arrival fluctuations for wave propagation through non-Kolmogorov turbulence. *Opt. Commun.*. 2009, 282: 705-708(影响因子: 1.552)
- [25] Liying Tan, Wenhe Du, Jing Ma, Siyuan Yu, Qiqi Han. Effect of the outer scale on the angle of arrival variance for free space-laser beam corrugated by non-Kolmogorov turbulence. *Journal of Russian Laser Research*. 2009, 30(6): 557-564(影响因子: 0.628)
- [26] Liying Tan, Qinglong Yang, Jing Ma, et al. Wavelength dimensioning of optical transport networks over nongeosynchronous satellite constellations. *Journal of Optical Communications and Networking*. 2010, 2(4): 166-174(影响因子: 0.941)
- [27] Liying Tan, Yuqiang Yang, Jing Ma, Guoxian Zheng. Influence of misalignment and aberrations on antenna received power in free-space laser communications. *Opt. Engineering*, 2009, 48(4): 033201(影响因子: 0.722)
- [28] Liying Tan, Yuqiang Yang, Jing Ma, Jianjie Yu. Receiver power penalty due to localized distortion induced by transmission-type optical antenna in inter-satellite laser communication. *Opt. Engineering*, 2009, 48(5): 056001(影响因子: 0.722)
- [29] Tan Liying, Ma Jing; Wang Guangming. Imaging system of wavelet optics described by the Gaussian linear frequency-modulated complex wavelet, *Journal of the Optical Society of America A: Optics and Image Science, and Vision*, v 22, n 12, December, 2005: 2668~2671
- [30] Tan Liying, Ma Jing, Wang Qi, Ran Qiwen. Filtering theory and application of wavelet optics at the spatial-frequency domain. *Applied Optics*, v 40, n 2, Jan 10, 2001: 257~260
- [31] Tan Liying, Ma Jing, Wang Qi, Ran Qiwen. Wavelet transforming characteristic of a lens. *Applied Optics*, v 41, n 29, Oct 10, 2002: 6182~6186
- [32] Tan, Liying; Ma, Jing; Wang, Qi. Description of the transfer function of an optical system with wavelet transforms. *Applied Optics*, v 45, n 14, May 10, 2006: 3275~3282
- [33] Xu Kehua, Ma Jing, Tan Liying, Yu Siyuan, BER Analysis and Improvement for

Pulse-Position Modulation Signal with an APD Receiver of Lunar-Earth Laser Link. 2005, SPIE 5625:746-757

- [34] Ma Jing, Gao chong, Tan li-ying. Angle-of-arrival fluctuations in moderate to strong turbulence. Chinese Physic, 2007, 55(5).
- [35] Guangyu Zhang, Jing Ma, Liying Tan, Siyuan Yu, Qiqi Han, Yunliang Chen. Single-photon acquisition probability for free-space quantum key distribution. SPIE, 2005, 5631: 173-180
- [36] Ma Jing, Zhang Guangyu, Tan Liying. Theoretical study of quantum bit rate in free-space quantum cryptography. Chinese Physics Letters, 2006, 23(6): 1379-1382
- [37] Pan Feng, Ma Jing, Tan Liyin, Yu Siyuan, Gao Chong. Scintillation characterization of multiple transmitters for ground-to-satellite laser communication[C]. 2005, Proceedings of the SPIE, 5640: 448-454
- [38] Chen Yun-Liang, Ma, Jing, Tan Li-Ying, Wang, Qi. Angular dispersion analysis of DOE-WDM. Proceedings of SPIE - The International Society for Optical Engineering. 2005,v 5636:409-416
- [39] Chen Yun-Liang, Ma, Jing, Tan Li-Ying, Wang, Qi. Vector design of phase-only diffractive WDM element. Proceedings of SPIE - The International Society for Optical Engineering.2005, v5636:417-424
- [40] Yu Si-Yuan, Ma, Jing, Tan Li-Ying. Detection of pointing errors with CMOS-based camera in intersatellite optical communications. Proceedings of SPIE - The International Society for Optical Engineering. 2005, 5633: 287-294
- [41] Ran, Qi-Wen; Yuan, Lin; Tan, Li-Ying; Ma, Jing; Wang, Qi. High order generalized permutational fractional Fourier transforms. Chinese Physics. 2004, 13(2):178-186
- [42] M. Li, J. Ma, L. Y. Tan, Y. P. Zhou, S. Y. Yu, J. J. Yu and C. Che. Investigation of the Irradiation Effect on Erbium-Doped Fiber Amplifiers Composed by Different Density Erbium-Doped Fibers. Laser Physics. 2009, 19(1): 138-142(IF:0.777)
- [43] M. Li, J. Ma, L. Y. Tan, Y. P. Zhou, S. Y. Yu and Q. Q. Han. Active Measuring Method for Investigating the Irradiation Effect on the Gain Characteristics of an Erbium-Doped Fiber Amplifier in Inter-Satellite Optical Communication. Journal of Russian Laser Research. 2009, 30(6): 583~590(影响因子: 0.628)
- [44] Jing Ma, Yijun Jiang, Siyuan Yu, Liying Tan, Wenhe Du. Packet error rate analysis of OOK, DPIM and PPM modulation schemes for ground-to-satellite

- optical communications. *Optics Communications*. 2010, 283: 237~242(影响因子: 1.552)
- [45] 马晶, 谭立英, 冉启文. 小波分析在光学信息处理中的应用. *物理学报*. 1999, 48(7):1223-1229
- [46] 俞建杰, 谭立英, 马晶, 韩琦琦, 杨玉强, 李密. 一种提高卫星光通信终端发射效率的新方法. *中国激光*. 2009, 36(3): 581-586
- [47] 潘峰, 马晶, 谭立英, 下行传输孔径接收光强起伏的统计特性, *中国激光*, 2006, 33(10): 1371~1374
- [48] 杨玉强, 谭立英, 马晶等. 星间光通信中球差和彗差对信号光远场特性的影响. *中国激光*, 2008, 35:1-5
- [49] 李密, 马晶, 谭立英, 周彦平, 于思源, 俞建杰, 常国龙, 卢春莲, 车驰. 卫星光通信中辐射对光纤放大器的性能影响分析. *中国激光*. 2009, 35(Suppl.2): 42-45
- [50] 陈云亮; 于思源; 马晶; 谭立英; 王骥, 卫星间光通信中多场扫描捕获的仿真优化, *中国激光*, 2004, 31(8):975~978
- [51] 马晶; 张光宇; 戎亦文; 谭立英, 基于半波片的偏振跟踪理论分析, *物理学报*, 2006, 55(1): 24~28
- [52] 俞建杰, 谭立英, 刘剑峰, 韩琦琦, 杨玉强. 卫星光通信天线系统轴间距的精确调试方法. *光学精密工程*. 2009, 17(9): 2091-2097
- [53] 俞建杰, 谭立英, 马晶, 杨玉强. 大功率半导体激光器阵列光束整形新进展. *激光与光电子学进展*. 2008, 45(4): 34-42
- [54] 杨玉强, 谭立英, 马晶. 星间光通信中局部波前畸变对捕获精度的影响. *强激光与粒子束*, 2009, 21(2):161-165
- [55] 都文和, 谭立英, 马晶. 非柯尔莫哥洛夫湍流光束漂移的理论研究. *光学学报*. 2009
- [56] 马晶; 谭立英; 王骥; 黄波, 卫星光通信研究进展及趋势, *空间科学学报*, 2000, 20:127~136
- [57] 潘峰, 马晶, 谭立英, 于思源, 孔径接收下大气闪烁频谱的理论和实验研究, *强激光与粒子束*, 2006, 18(9): 1457~1559
- [58] 马晶, 徐科华, 谭立英, 王健, 美国火星激光通信系统分析, *空间科学学报*, 2006, 26(5): 364~369
- [59] 马晶, 徐科华, 谭立英, 深空光通信中的图像信标捕获技术, *光学学报*, 2006, 26(10):1447~1552
- [60] 潘峰, 马晶, 谭立英, 于思源, 星地下行孔径接收闪烁频谱的理论研究, *强*

- 激光与粒子束, 2006, 18(8): 1253~1256
- [61] 马晶, 潘峰, 谭立英, 星地激光链路中光束发散角与跟瞄误差的最佳比值, 强激光与粒子束, 2006, 18(8): 1233~1238
- [62] 高宠; 马晶; 谭立英, 光束在强湍流区中传播的到达角起伏, 强激光与粒子束, 2006, 18(6): 891~894
- [63] 马晶; 徐科华; 谭立英, 基于相位相关的深空光通信扩展信标跟踪技术研究, 光学精密工程, 2006, 14(3): 515~519
- [64] 武凤; 周彦平; 于思源, 基于空间成像的卫星光通信双向捕获技术, 光电子激光, 2006, 17(6): 700~704
- [65] 高宠; 马晶; 谭立英; 于思源; 潘锋, 大气光通信中大气闪烁时间平滑效应研究, 光学学报, 2006, 26(4): 481~486
- [66] 韩琦琦; 马晶; 谭立英; 王骐; 恒星背景噪声对星间激光链路跟瞄系统影响的仿真分析, 光学技术, 2006, 32(3): 444~448
- [67] 张光宇; 马晶; 谭立英, 星地量子密钥分配中单光子捕获理论分析, 光电工程, 2006, 33(3): 91~94
- [68] 徐科华; 马晶; 谭立英, 伽利略光学实验分析, 宇航学报, 2006, 27(2): 312~316
- [69] 马晶; 张光宇; 谭立英; 王强, 量子密码通信中量子比特率理论分析, 量子光学学报, 2006, 12(1): 36~39
- [70] 徐科华; 马晶; 谭立英, 深空光通信中图像信标的捕获和跟踪, 光学学报, 2006, 26(2): 176~180
- [71] 徐科华; 马晶; 谭立英, 深空光通信中光束瞄准技术研究, 光学精密工程, 2006, 14(1): 16~21
- [72] 徐科华; 马晶; 谭立英, 深空光通信中导航星表的构造, 光电工程, 2006, 33(1): 31~33
- [73] 马晶; 张光宇; 谭立英, 基于泊松分布单光子源的量子误码率的分析, 光学技术, 2006, 32(1): 101~104
- [74] 张光宇; 马晶; 谭立英, 自由空间量子密码通信中量子密钥比特率研究(英文), 量子电子学报, 2005, 22(6): 868~872
- [75] 张光宇; 马晶; 谭立英; 于思源, 基于基模高斯光束的单光子捕获概率研究, 激光技术, 2005, 29(5): 522~524
- [76] 张光宇; 马晶; 谭立英, 基于厄米-高斯光束的单光子捕获理论研究, 光子学报, 2005, 34(8): 1201~1204
- [77] 韩琦琦; 马晶; 谭立英; 王骐, 卫星光通信中恒星背景噪声分析及抑制方法

- 研究, 光学技术, 2005, 31(3):330~334
- [78] 徐科华; 马晶; 谭立英, 可行的月地激光链路分析, 光通信技术, 2005, 5:17~19
- [79] 马晶; 陈云亮; 谭立英; 王骐, 衍射光学元件波分复用角色散特性分析, 中国激光, 2005, 32(4):532~536
- [80] 张文杰; 谭立英; 马晶, 光子晶体四信道波分复用器的研究, 光学与广电技术, 2005, 3(1):38~41
- [81] 徐科华; 马晶; 谭立英, 月地激光通信系统误码率分析, 半导体光电, 2005, 26(1):50~53
- [82] 张光宇; 马晶; 谭立英; 于思源; 韩琦琦; 陈云亮, 自由空间量子密钥分配协议研究, 光通信技术, 2004, 9:38~40
- [83] 张光宇; 马晶; 谭立英, 自由空间量子密码术的发展状况, 激光技术, 2004, 28(3):281~285
- [84] 马晶; 韩琦琦; 谭立英; 王骐, 卫星光通信技术发展及其影响因素分析, 2004, 10:45~47
- [85] 于思源; 马晶; 谭立英, 提高卫星光通信扫描捕获概率的方法研究, 光电子激光, 2005, 16(1):57~62
- [86] 于思源; 马晶; 谭立英, 自由空间激光通信技术发展趋势分析, 光通信技术, 2004, 12:47~50
- [87] 于思源; 谭立英; 马晶; 王俊, 激光星间链路中振动补偿技术研究, 光电子激光, 2004, 15(4):472~476
- [88] 于思源; 马晶; 谭立英; 高惠德; 马祖光, 激光星间链路中天线扫描捕获技术实验室模拟研究, 2002, A29(6):498~502
- [89] 王骐; 马晶; 谭立英; 韩琦琦, 简化振动模型下空间光通信系统误码率分析, 激光技术 2002, 26(1):4~8
- [90] 徐科华, 马晶, 谭立英; 深空光通信中恒星信标的捕获跟踪技术研究, 光电工程, 2006(11):8-11
- [91] 徐科华, 马晶, 谭立英; 深空光通信红外图像信标的捕获跟踪技术研究, 光学精密工程, (录用)
- [92] 徐科华, 马晶, 谭立英; 深空光通信的发展现状, 中国宇航学会第二届深空探测专题会议, 2005, 哈尔滨
- [93] 马晶, 高宠, 谭立英. 星地光通信中 PAT 链路的衰落冗余分析. 光学精密工程, 2007, 15(2).
- [94] 马晶, 高宠, 谭立英. Angle-of-arrival fluctuation at large zenith angles. 光子学

报, 2007,37(1).

- [95] 高宠, 马晶, 谭立英. 风向和接收孔径对到达角起伏功率谱的影响. 哈尔滨工业大学学报. 2006, 38(sup):1520-1523.
- [96] 陈云亮, 马晶, 谭立英, 王骥. 高斯光束特性对卫星光通信的影响分析. 中国激光 (增刊) v31:393-395
- [97] 马晶, 李密, 谭立英, 于思源, 周彦平, 俞建杰, 车驰, 常国龙, 卢春莲. 卫星光通信中空间辐射对 EDFA 性能的影响分析. 宇航学报. 2009, 30(1): 1-5
- [98] 韩琦琦; 于思源; 马晶; 谭立英; 王骥, 耦合运动对星间激光链路瞄准过程影响及补偿方法研究, 宇航学报, 2006, 27(4): 582~587
- [99] 高宠; 韩琦琦; 马晶; 谭立英; 于思源; 潘锋, 大气光通信中 Turbo 码的最大后验概率译码, 光电工程, 2006, 33(4): 63~67
- [100] 韩琦琦; 马晶; 于思源; 谭立英; 王骥, 卫星光通信中耦合运动对光信号跟踪影响分析, 宇航学报, 2005, 26(4):405~409
- [101] 马晶; 韩琦琦; 于思源; 谭立英; 关文成, 卫星平台振动对星间激光链路的影响和解决方案, 激光技术, 2005, 29(3):228~232
- [102] 陈云亮; 于思源; 马晶; 谭立英; 王骥, 一种新型的卫星光通信高速跟瞄探测装置, 光电子 激光, 2005, 16(5):596~600
- [103] 高宠, 于思源, 马晶, 谭立英, 强湍流区的光束漂移, 强激光与粒子束, 2006, 18(10): 1597~1561

国际会议论文

- [1] Tan Liying, Ma Jing, Ran Qiwen. The elementary theory of wavelet optical diffraction. IEEE. CLEO/QELS'99. Proc. P. 113
- [2] Tan Liying, Ma Jing, et al. Influence on bit error rate under the circumstance of sine vibration in a space optical communication system. ICEMI'99, Harbin .CHINA

学术理论专著

- [1] 谭立英.《小波光学导论》.科学出版社, 2010 年.
- [2] 谭立英,马晶.《卫星光通信技术》.科学出版社, 2004 年
- [3] 马晶,谭立英.《卫星光通信原理》.国防工业出版社, 2010 年.
- [4] 冉启文,谭立英.《分数傅立叶光学导论》.科学出版社, 2004 年
- [5] 冉启文,谭立英.《小波分析与分数傅立叶变换及应用》.国防工业出版社, 2003 年

(2) 招收博士及硕士研究生的学科:

- 招收博士和硕士研究生的学科:

- 物理电子学 (一级学科: 电子科学与技术)
- 光学工程 (一级学科: 电子科学与技术)

(3) 博士及硕士研究生的研究方向:

- [1] 卫星激光通信原理及理论
- [2] 卫星激光通信技术及应用
- [3] 小波光学理论;
- [4] 分数傅里叶光学;
- [5] 卫星间量子保密光通信理论
- [6] 高精度光束瞄准控制理论
- [7] 卫星光通信快速捕获与稳定跟踪理论
- [8] 极弱光信号探测理论
- [9] 激光束远场分布及传输理论
- [10] 光信号处理技术及方法

(4) 博士和硕士研究生的专业需求:

▪ 博士研究生的硕士专业需求:

- 物理电子学
- 光学工程
- 微电子学
- 物理学及应用物理学
- 光信息科学与技术
- 应用光学
- 控制及精密控制
- 电子信息科学与技术
- 通信
- 信号和图像处理
- 应用数学
- 计算机
- 精密机械专业

▪ 硕士研究生的本科专业需求:

- 物理电子学
- 物理学及应用物理学
- 光信息科学与技术
- 应用光学
- 控制及精密控制

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