



People

**Professor**

**Associate Professor**

**Lecturer**

**Assistant Professor**

Location >> People >> Professor

**Professor**

**Weisheng Hu**



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**Biography**

Weisheng Hu received his B.S. in 1986 from Tsinghua University, M.S. in 1989 from Beijing University of Science and Technology, and Ph.D. in 1997 from Nanjing University, China. He joined Wuhan University of Science and Technology in 1989-94 as assistant professor, Shanghai Jiao Tong University in 1997-99 as post-doctorate fellow, and from 1999 as professor.

He was director of SKL of advanced optical communication systems and networks in 2003-2007 and then deputy director in 2008-2012. He served as member of coordinate task force of CAINONet and 3Tnet in 1999-2006, and technology forecast of Shanghai (2004-). He served as editorial board for JLT, COL, and FOC, and TPC for OFC, APOC, Optics East, LEOS/PS, CLEO/PS, ICICS, INFOCOM and ICC workshop. He published ~100 journal papers, holds 38 patents. He received two National Award of Science and Technology Progress.

**Honors**

1. National Awards of Science and Technology Progress 2002 and 2008.
2. Award of Shanghai Science and Technology Progress 2007
3. Award of Jiangsu Science and Technology Progress 2000
4. Award of Science and Technology Progress of Ministry of Education 1999
5. NSFC Outstanding Young Science 2008
6. Adviser of The National Excellent Doctoral Dissertation 2010
7. Best student paper award by Ph.D. student Lilin Yi in SPIE APOC 2007
8. The New Century National Hundred, Thousand and Ten Thousand Talent Project 2004
9. China Young Innovation Award of Science and Technology 2003
10. Excellent Individual of the 15th Anniversary of 863 Program 2001
11. A Special Government Allowances by State Council 2000
12. Ten New Shanghai IT Youth 2004
13. Outstanding Young Teachers in Colleges Shanghai 1999

**Research Areas**

1. Broadband access networks
2. Optical switching and networks
3. Big data transportation

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**Selected Publications**

1. Weiqiang Sun, Zijie Xing, Kai Kang, Yaohui Jin, Wei Guo, Weisheng Hu, Guoying Zhang, Rajiv Papneja, Performance of Label Switched Path Dynamic Provisioning in GMPLS Networks, IEEE Communications Magazine, January 2012, pp.100-

2. Qiwei Weng, Xuelin Yang, Weisheng Hu, Theoretical Analysis of High-Speed All-Optical Turbo-Switches, IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS, VOL.18, NO.2, pp:662-669, MAR-APR 2012
3. Hongliang Ren, Yali Qin, Hao Wen, Qianjun Cao, Shuqin Guo, Liping Chang, Weisheng Hu, Chun Jiang, Yaohui Jin, Photonic Crystal Three-Port Channel Drop Filter Based on One-Way Waveguide, IEEE PHOTONICS TECHNOLOGY LETTERS, Vol. 24, No. 5, pp. 332-334, MAR 1 2012
4. He Chen, Shilin Xiao, Lilin Yi, Jie Shi, Pei Yang, Yi Dong, Weisheng Hu, Complementary Decoder Based on Polarization Modulation for the SAC-OCDMA PON, IEEE PHOTONICS TECHNOLOGY LETTERS, Vol. 24, No. 5, pp.335-337, MAR 1 2012
5. Min Zhu, Shilin Xiao, Zhao Zhou, Wei Guo, Lilin Yi, Meihua Bi, Weisheng Hu, and Benoit Geller, An upstream multi-wavelength shared PON based on tunable self-seeding Fabry-Perot laser diode for upstream capacity upgrade and wavelength multiplexing, OPTICS EXPRESS, VOL.19, NO.9, pp. 8000-8010, APR 25 2011
6. Lumin Zhang, Le Chang, Yi Dong, Weilin Xie, Hao He, and Weisheng Hu: Phase drift cancellation of remote radio frequency transfer using an optoelectronic delay-locked loop, OPTICS LETTERS, VOL. 36, NO.6, pp. 873-875, MAR 15 2011
7. Yan Wang, Yaohui Jin, Wei Guo, Weiqiang Sun, and Weisheng Hu, Virtualized Optical Network Services across Multiple Domains for Grid Applications, IEEE COMMUNICATIONS MAGAZINE, VOL. 49, NO. 5, pp. 92-101, MAY 2011
8. He Chen, Shilin Xiao, Lilin Yi, Zhao Zhou, Min Zhu, Jie Shi, Yi Dong, and Weisheng Hu, A Tunable Encoder/Decoder Based on Polarization Modulation for the SAC-OCDMA PON, IEEE PHOTONICS TECHNOLOGY LETTERS, VOL.23, NO. 11, pp. 748-750, JUN 1 2011
9. Wei Guo, Weiqiang Sun, Yaohui Jin, and Weisheng Hu, Chunming Qiao, Demonstration of Joint Resource Scheduling in an Optical Network Integrated Computing Environment, IEEE COMMUNICATIONS MAGAZINE, Vol. 48, No. 5, pp. 76-83, 2010
10. Ming Cheng, Weisheng Hu, Weiqiang Sun, Fangfang Yan, and Hao He, Wavelength Converted Broadcast-Selective Buffering Contention Resolution in Synchronous WDM OPS Networks, JOURNAL OF LIGHTWAVE TECHNOLOGY, Vol. 28, No. 9, pp.1356-1362, 2010
11. Min Zhu, Wei Guo, Shilin Xiao, Anne Wei, Yaohui Jin, Weisheng Hu, and Benoit Geller, Availability-Driven Scheduling for Real-Time Directed Acyclic Graph Applications in Optical Grids, JOURNAL OF OPTICAL COMMUNICATIONS AND NETWORKING, Vol. 2, No. 7, pp. 469-480, 2010
12. Xuelin Yang, R. J. Manning and Weisheng Hu, Simple 40 Gbit/s all-optical XOR gate, ELECTRONICS LETTERS, Vol. 46, No.3, pp.229-230, 2010
13. Min Zhu, Wei Guo, Shilin Xiao, Yi Dong, Weiqiang Sun, Yaohui Jin, and Weisheng Hu, Design and performance evaluation of dynamic wavelength scheduled hybrid WDM/TDM PON for distributed computing applications, OPTICS EXPRESS, Vol. 17, No. 2, pp. 1023-1032, 2009
14. Han Chen, Yi Dong, Hao He, Weisheng Hu, and Lemin Li, Photonic radio-frequency phase shifter based on polarization interference, OPTICS LETTERS, Vol. 34, No. 15, pp. 2375-2377, 2009
15. Fangfang Yan, Weisheng Hu, Weiqiang Sun, Wei Guo, Yaohui Jin, Hao He, Yi Dong, and Shilin Xiao, Nonblocking Four-Stage Multicast Network for Multicast-Capable Optical Cross Connects, JOURNAL OF LIGHTWAVE TECHNOLOGY, Vol. 27, No. 17, pp. 3923-3932, 2009
16. Fangfang Yan, Weisheng Hu, Weiqiang Sun, Wei Guo, and Yaohui Jin, Efficient Sharing of Fixed Wavelength Converters in Clos-type Wavelength Interchanging Cross Connects, JOURNAL OF LIGHTWAVE TECHNOLOGY, Vol. 27, No. 19, pp. 4189-4197, 2009
17. Hong Du, Weisheng Hu, Hao He, Chunlei Zhang, Yi Dong, Weiqiang Sun, Wei Guo, Yaohui Jin, and Shilin Xiao, Separated Unicast/Multicast Splitter-and-Delivery Switch and Its Use in Multicasting-Capable Optical Cross-Connect, IEEE PHOTONICS TECHNOLOGY LETTERS, Vol. 21, No. 6, pp. 368-370, 2009
18. Lei Cai, Zhixin Liu, Shilin Xiao, Min Zhu, Rongyu Li, and Weisheng Hu, Video-service-overlaid wavelength-division-multiplexed passive optical network, IEEE PHOTONICS TECHNOLOGY LETTERS, v 21, n 14, p 990-992, July 15, 2009
19. Wei Guo, Zhengyu Wang, Zhenyu Sun, Weiqiang Sun, Yaohui Jin, Weisheng Hu and Chunming Qiao, Task scheduling accuracy analysis in optical grid environments, PHOTONIC NETWORK COMMUNICATIONS, Vol. 17, No. 3, pp. 209-217, 2009
20. Weiqiang Sun, Guowu Xie, Yaohui Jin, Wei Guo, Weisheng Hu, Xinhua Lin, Min-You Wu, Wentao Li, Rong Jiang, Xueqin Wei; A cross-layer optical circuit provisioning framework for data intensive IP end hosts; IEEE COMMUNICATIONS MAGAZINE; Vol. 46, No. S30-S37; 2008
21. Zhenyu Sun, Wei Guo, Zhengyu Wang, Yaohui Jin, Weiqiang Sun, Weisheng Hu, Chunming Qiao; Scheduling Algorithm for Workflow-Based Applications in Optical Grid; JOURNAL OF LIGHTWAVE TECHNOLOGY; Vol. 26, No. 17-20, pp. 3011-3020; 2008
22. Lilin Yi, Weisheng Hu, Yi Dong, Yaohui Jin, Wei Guo, Weiqiang Sun; A polarization-independent subnanosecond 2x2 multicast-capable optical switch using a Sagnac interferometer; IEEE PHOTONICS TECHNOLOGY LETTERS; Vol. 20, No. 5-8, pp. 539-541; 2008
23. Wei Guo, Zheng Liang, Zhenyu Sun, Shilin Xiao, Yaohui Jin, Weiqiang Sun, Weisheng Hu; Task scheduling considering fault probability for distributed computing applications over an optical network; JOURNAL OF OPTICAL NETWORKING; Vol. 7, No. 11, pp. 947-957; 2008

24. Yi Zhu, Yaohui Jin, Weiqiang Sun, Wei Guo, Weisheng Hu, Wen-De Zhong and Min-You Wu, Multicast Flow Aggregation in IP over Optical Networks, IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS, Vol25, Iss 5, pp.1011-1021, June 2007
25. Lilin Yi, Yves Jaouen, Weisheng Hu, Yikai Su, and Sébastien Bigo, Improved slow-light performance of 10 Gb/s NRZ, PSBT and DPSK signals in fiber broadband SBS, OPTICS EXPRESS, Vol. 15, Issue 25, pp. 16972-16979, December 12, 2007
26. Lilin Yi, Yves Jaou?n, Weisheng Hu, Junhe Zhou, Yikai Su, and Erwan Pincemin, Simultaneous demodulation and slow right of differential phase-shift keying signals using stimulated-brillouin-scattering-based optical filtering in fiber, OPTICS LETTERS, Vol. 32, Issue 21, pp. 3182-3184, November 1, 2007
27. Yi Dong, Hao He, Weisheng Hu, Zhaohui Li, Qijie Wang, Wu Kuang, Tee Hiang Cheng, Yang Jing Wen, Yixin Wang, and Chao Lu, Photonic microwave phase shifter/modulator based on a nonlinear optical loop mirror incorporating a Mach-Zehnder interferometer, OPTICS LETTERS, Vol. 32, Issue 7, pp. 745-747, April 1, 2007
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32. Yan Wang, Yaohui Jin, Wei Guo, Weiqiang Sun, and Weisheng Hu, Joint scheduling for optical grid applications, JOURNAL OF OPTICAL NETWORKING, Vol. 6, No. 3, pp.304-318, March 2007
33. Xiaodong Wang, Weisheng Hu and Yunfeng Peng, Lightpath-based flooding for GMPLS-controlled all-optical networks, IEEE COMMUNICATIONS LETTERS, VOL. 11, NO. 1, pp.91-93, January 2007
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37. Lilin Yi, Weisheng Hu, Yikai Su, Mingyi Gao, and Lufeng Leng, Design and system demonstration of a tunable slow-light delay line based on fiber parametric process, IEEE PHOTONICS TECHNOLOGY LETTERS, VOL. 18, NO. 24, pp. 2575-2577, 15 DECEMBER 2006
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40. Yi Dong, Zhaohui Li, Chao Lu, Yixin Wang, Yang Jing Wen, Tee Hiang Cheng, and Weisheng Hu, Improving dispersion tolerance of Manchester coding by incorporating duobinary coding, IEEE PHOTONICS TECHNOLOGY LETTERS, VOL. 18, NO. 16, pp.1723~1725, August 15, 2006
41. Xiangqing Tian, Yikai Su, Weisheng Hu, Lufeng Leng, Peigang Hu, Hao He, Yi Dong, and Lilin Yi, Precise in-band OSNR, and spectrum monitoring using high-resolution swept coherent detection, IEEE PHOTONICS TECHNOLOGY LETTERS, VOL. 18, NO. 1, pp. 145-147, January 1, 2006
42. Mingyi Gao, Chun Jiang, Weisheng Hu, Jingyuan Wang and Hongliang Ren, Optimized design of two-pump fiber optical parametric amplifier and its noise characteristics, OPTICS COMMUNICATIONS, Volume 258, Issue 2, Pages 321-328, 15 February 2006
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45. Yue Wang, Weisheng Hu, Yikai Su, Zheng Zheng, Lufeng Leng, Xiangqing Tian, and Yaohui Jin, Performance study of 40-Gb/s RZ signals through cascaded thin-film filters with large dispersion slope, OPTICS EXPRESS, Vol. 13, No. 6, pp.2176-2181, 21 March 2005
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50. Wen Zhang, Chengao Wang, Jianwei Shu, Chun Jiang, and Weisheng Hu, Design of fiber-optical parametric amplifiers by genetic algorithm, IEEE PHOTONICS TECHNOLOGY LETTERS, VOL. 16, NO. 7, pp.1652-1654, July 2004
51. Chun Jiang, Weisheng Hu, and Qingji Zeng, Improved gain characteristics of high concentration erbium-doped phosphate fiber amplifier, IEEE PHOTONICS TECHNOLOGY LETTERS, VOL. 16, NO. 3, pp.774-776, March 2004
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53. W. S. Hu, Z. G. Liu, Z. C. Wu, J. M. Liu, X. Y. Chen and D. Feng, Pulsed laser deposition of (001) textured LiNbO<sub>3</sub> films on Al<sub>2</sub>O<sub>3</sub>/SiO<sub>2</sub>/Si substrate, APPLIED SURFACE SCIENCE, Volume 141, Issue 1-2, pp.197-200, March 1999
54. Yaohui Jin, Qingji Zeng and Weisheng Hu, Comparison of intraband crosstalk penalty in WDM networks for externally and directly modulated lasers, IEE ELECTRONICS LETTERS, Vol. 35, No. 3, pp.220-221, February 4, 1999
55. W. S. Hu and Q. J. Zeng, Multicasting optical cross connects employing splitter-and-delivery switch, IEEE PHOTONICS TECHNOLOGY LETTERS, Vol. 10, No. 7, pp. 970-972, July 1998
56. W. S. Hu, Q. J. Zeng, and Y. H. Jin, Reduction of coupling loss in a one-to-many collimating system for a wavelength division (de)multiplexer, APPLIED OPTICS, Vol. 37, Issue 19, pp. 4084-4090, July 1, 1998

## Books and Patents

1. Book chapter of Slow Light, FIBER OPTICS FRONTIER, Science Press of China, 2011-10-1
2. Book chapter of High-Speed All-Optical Switches Based on Cascaded SOAs, in SELECTED TOPICS ON OPTICAL AMPLIFIERS IN PRESENT SCENARIO, Intech Web Publish, 2012-4
3. 53 China patents, and one US patent

## Courses

1. "Fundamental of Digital Optical Fiber Communications" Fall semester

## Active Grants & Projects

1. A new generation of optical transport network (60825103), National Outstanding Youth Science Foundation
2. Key technology and experimental platform of optical packet switching (60,632,010), National Natural Science Foundation of China
3. New generation optical network standards, testing and application (2008AA01A329), e National 863 project
4. Optical transport network (09XD1402200 ), Shanghai science and technology outstanding subject leaders

## Editorships

1. Associate Editor for Journal of Lightwave Technology 2007
2. Topic Editor for Chinese Optics Letters 2009
3. Editor for Frontiers of Optoelectronics in China 2009
4. Editor for Optical Communication Research (in Chinese) 2010
5. Editor for Microcomputer application (in Chinese) 2008