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Name Surname: Yahya Kemal BAYKAL

Education: B.Sc., Electrical Engineering, [Middle East Technical University](#), Ankara, Turkey 1974.

M.Sc. "Heat Distribution in an Inhomogeneous Model of Head Exposed to Microwave Radiation due to Loop or Dipole Antenna Excitations", Electrical Engineering, [Middle East Technical University](#), Ankara, Turkey, 1977.

Ph.D. "Coherence and Turbulence Effects on the Intensity Scintillations at Optical Frequencies", EECS, [Northwestern University](#), Evanston, IL. USA 1982.

Professional Experience and Scholarships Received:

2014- Chairman, Çankaya University, Electrical-Electronics Engineering Department, Ankara, Turkey.

2014- Professor, Çankaya University, Electrical-Electronics Engineering Department, Ankara, Turkey.

2007 – 2015 Vice Rector, Çankaya University, Ankara, Turkey.

2008 - 2009 Acting Manager, Graduate School of Natural and Applied Sciences, Çankaya University, Ankara, Turkey.

2005 – 2009 Chairman, Çankaya University, Electronic and Communication Engineering Department, Ankara, Turkey.

2004 – 2014 Professor, Çankaya University, Electronic and Communication Engineering Department, Ankara, Turkey.

2003 - 2004 Associate Professor, Çankaya University, Electronic and Communication Engineering Department, Ankara, Turkey.

1996 - 2002 General Manager (1998-2002), Assistant General Manager (1996-1998), İtek Telekomünikasyon San. ve Tic. A.Ş. (Iskratel) Company.

1987 - 1995 Professional Systems Manager, Türk Philips Trades A.Ş. Company.

1987, November – Received Associate Professorship

1987-1987 Assistant Professor, Electrical Engineering Department, [Middle East Technical University](#), Ankara, Turkey.

1985 - 1987 Project Manager, Teletaş Company (Alcatel), R&D Fiber Optics Group.

1984 - 1985 Assistant Professor, Electrical Engineering Department, [Hacettepe University](#), Ankara, Turkey.

1984 - 1984 Assistant Professor, Electrical Engineering Department, [Middle East Technical University](#), Ankara, Turkey.

1982 - 1984 Military, Telecommunications School, Ankara, Turkey.

1981 - 1982 Royal E. Cabell Dissertation Year Fellowships from [Northwestern University](#), Evanston, Illinois, USA.

1981 Teaching Assistanship, EECS Department, [Northwestern University](#), Evanston, Illinois, USA

1977 - 1981 Ph.D Scholarship from the [Turkish Ministry of Education](#).

1975 - 1977 Research Assistant, Electrical Engineering Department, [Middle East Technical University](#), Ankara, Turkey.

Courses Offered:

Fiber Optic Telecommunication, MS, Electrical Engineering Department, Middle East Technical University, Ankara, Turkey.

Fourier Optics, MS, Electrical Engineering Department, Middle East Technical University, Ankara, Turkey.

Electromagnetics Theory, BS, Electrical Engineering Department, Hacettepe University, Ankara, Turkey.

Antenna and Propagation, BS, Electrical Engineering Department, Hacettepe University, Ankara, Turkey.

Telecommunication Systems, MS, Electronic and Communication Engineering Department, Çankaya University, Ankara, Turkey.

Remote Sensing, MS, Electronic and Communication Engineering Department, Çankaya University, Ankara, Turkey.

Telecommunication Networks, MS, Electronic and Communication Engineering Department, Çankaya University, Ankara, Turkey.

Advanced Telecommunication Techniques, MS, Electronic and Communication Engineering Department, Çankaya University, Ankara, Turkey.

Probability and Random Processes, BS, Electronic and Communication Engineering Department, Çankaya University, Ankara, Turkey.

Introduction to Telecommunication Networks, BS, Electronic and Communication Engineering Department, Çankaya University, Ankara, Turkey.

Digital Signal Processing, BS, Electronic and Communication Engineering Department, Çankaya University, Ankara, Turkey.

Telecommunication Networks, BS, Electronic and Communication Engineering Department, Çankaya University, Ankara, Turkey.

Analytic Techniques in Electronic and Communication Engineering, BS, Çankaya University, Ankara, Turkey.

Mathematical Techniques in Electrical Engineering, BS, Electrical-Electronics Engineering, Çankaya University, Ankara, Turkey.

Probability and Random Variables, BS, Electrical-Electronics Engineering, Çankaya University, Ankara, Turkey.

Microprocessors, BS, Electrical-Electronics Engineering, Çankaya University, Ankara, Turkey.

Control Systems, BS, Electrical-Electronics Engineering, Çankaya University, Ankara, Turkey.

Telecommunications Essentials, BS, Electrical-Electronics Engineering, Çankaya University, Ankara, Turkey.

Optical Communication Systems, BS, Electrical-Electronics Engineering, Çankaya University, Ankara, Turkey.

Projects Participated:

Determining the Obstructions in the Urinary Tract through Non Invasive Clinical Measurements (1978).

Effects of Atmospheric Turbulence to Atmospheric Transmittance (Supported by American Air Force) (1980-1982).

140 Mbit/s Fiber Optics Line Terminal Equipment Manufacturing Licence Work (1985-1987).

Fiber Optics Cable Manufacturing Feasibility Work (1985-1987).

System Integration of Hotel Management Computer Networks (1988).

Establishment of Cable TV Distribution Systems for PTT covering Ankara and Adana Regions (1990-1993).

Establishment of Cable TV Control Center for PTT in Ankara (1991).

Establishment of Çeşme-İzmir Highway Toll Collection System (1992).

Establishment of 140 Mb/s Video Codec Transmission System for PTT (1989,1994).

Procurement, Installation and Maintenance of Rural Area Telephone Exchanges for Türk Telekom (1996-2002).

Pilot Tests for Türk Telekom for the Integration of No.7 Signalling to the Rural Area Telephone Exchanges (2000).

Fiber Access Systems, ISDN and XDSL Pilot Tests for Türk Telekom (2001).

Effects of source beam types on optical wave propagation in turbulent atmosphere, TÜBİTAK - RFBR Joint Project (2009-2011).

COST Action IC1101 Optical Wireless Communications – An Emerging Technology (OPTICWISE) (2011-2015). Act as the Chairman of the Special Interest Group on Underwater Optical Wireless Communication.

Underwater Wireless Optical Communication System Design and Application (Sualtı Optik Kablosuz Haberleşme Sistemi Tasarımı ve Uygulaması, TÜBİTAK – 113E589 (2014-2016).

Development of fluorescent labelled on-chip imaging platform based on structural illumination technique for the early diagnosis of cancer. TÜBİTAK - 213E035 (2014-2016).

Honors & Awards:

Research Assistantship in the Middle East Technical University

Scholarship for Ph.D. from the Turkish Ministry of Education

Teaching Assistantship in Northwestern University

Royal E. Cabell Dissertation Year Fellowships by Northwestern University

Editorship of Çankaya University Journal of Science and Engineering

OSA Senior Membership

Editorial Board Member in the SCI Journal of “Optical and Quantum Electronics”

PUBLICATION LIST

- 1) A. Hızal and Y. K. Baykal, “Heat potential distribution in an inhomogeneous spherical model of a cranial structure exposed to microwaves due to loop or dipole antennas”, IEEE Trans. Microwave Theory and Techniques, MTT-26, 607-612, Aug. 1978.
- 2) Y. Baykal and M. A. Plonus, “Two-source, two-frequency spherical wave structure functions in atmospheric turbulence”, J. Opt. Soc. Am., 70, 1278-1279, Oct. 1980.
- 3) Y. Baykal, C. F. Ouyang and M. A. Plonus, “Scintillation index for a temporally partially coherent spherical wave light source in weak turbulence”, Radio Science, 16, 343-345, May-June 1981.
- 4) Y. Baykal, C. F. Ouyang, M. A. Plonus and S. J. Wang, “Transmitter and receiver aperture averaging for the intensity fluctuation of a beam wave in the turbulent atmosphere”, Digest 1981 URSI/IEEE AP-S Intl. Symposium, Los Angeles, CA, U.S.A., 108, 16-19 June 1981.
- 5) Y. Baykal and M. A. Plonus, “Frequency averaging for beam waves in weak and very strong turbulence”, IEEE Trans. on Antennas and Propagation, AP-30, 802-805, July 1982.
- 6) Y. Baykal, M. A. Plonus and S. J. Wang, “Propagation of partially coherent radiation through atmospheric turbulence”, (invited), SPIE 26. Annual Intern. Tech. Symp., San Diego, CA, U.S.A., Aug. 1982. SPIE Proc. Vol. 358, 106-114, Aug. 1982.

- 7) Y. Baykal, M. A. Plonus and S. J. Wang, "The effect of source partial coherence on the intensity fluctuations in atmospheric turbulence", Annual Meeting of Opt. Soc. Am., Tucson, AZ, 18-22 Oct. 1982, J. Opt. Soc. Am., 72, 1810, December 1982.
- 8) M. A. Plonus, Y. Baykal and S. J. Wang, "The coherence of the source in laser beam propagation", (invited), Digest, 1983, OSA Topical Meeting on Optical Techniques for Remote Probing of the Atmosphere, Incline Village, NV, U.S.A., (TUC-17), 1-4 Jan. 1983.
- 9) S. J. Wang, Y. Baykal and M. A. Plonus, "Receiver aperture averaging effects for the intensity fluctuation of a beam wave in the turbulent atmosphere", J. Opt. Soc. Am., Vol. 73, 831-837, June 1983.
- 10) Y. Baykal, M. A. Plonus and S. J. Wang, "The scintillations for weak atmospheric turbulence using a partially coherent source", Radio Science, Vol.18, 551-556, July-Aug. 1983.
- 11) Y. Baykal and M. A. Plonus, "Intensity fluctuations due to a spatially partially coherent source in atmospheric turbulence as predicted by Rytov's method", J. Opt. Soc. Am. A, Vol. 2, 2124-2132, Dec. 1985.
- 12) Y. Baykal, "Intensity fluctuations due to higher-order Gaussian laser modes in weak atmospheric turbulence", Optics Communications, 57, 311-313, May 1986.
- 13) Y. Baykal, "Correlation and structure functions for multimode laser beam incidence in atmospheric turbulence", J. Opt. Soc. Am. A, 4, 817-819, May 1987.
- 14) Y. Baykal, "Scintillation index for a multimode laser incidence in weak atmospheric turbulence", Optics Communications, 62, 295-299, 1 June 1987.
- 15) Yahya Baykal, "Average transmittance in turbulence for partially coherent sources", Optics Communications, 231/1-6, 129-136, 15 Feb. 2004.
- 16) Halil T. Eyyuboğlu and Yahya Baykal, "Effects of laser multimode content on the angle-of-arrival fluctuations in free space optics access systems", SPIE, Conference on Fluctuations and Noise, Maspalomas, Gran Canaria, Spain, 25-28 May 2004. SPIE Proc. 5473, 184-190, 2004.
- 17) Yahya Baykal, "Rate averaging in free space optics systems using incoherent sources", SPIE, Eleventh International Symposium on Atmospheric and Ocean Optics/Atmospheric Physics, Tomsk, Russia, June 23 - 26, 2004. SPIE Proc. Gennadii G. Matvienko, Vladimir P. Lukin, Editors, 5743, 100-109, Dec. 2004.
- 18) Halil T. Eyyuboğlu and Yahya Baykal, "Cosine-Gaussian laser beam intensity in turbulent atmosphere", SPIE, Eleventh International Symposium on Atmospheric and Ocean Optics/Atmospheric Physics, Tomsk, Russia, June 23 - 26, 2004. SPIE Proc. Gennadii G. Matvienko, Vladimir P. Lukin, Editors, 5743, 131-141, Dec. 2004.
- 19) Yahya Baykal, "Correlation and structure functions of Hermite-sinusoidal-Gaussian laser beams in a turbulent atmosphere", J. Opt. Soc. Am. A, 21, 1290-1299, July 2004.
- 20) Yahya Baykal and Halil T. Eyyuboğlu, "Dependence of angle-of-arrival fluctuations on source coherence for free space optics links in a turbulent atmosphere", ICTSM12 Proceedings, 121-126, July 2004.

- 21) A. Küçükoğlu ve Yahya Baykal, "Geniřbant eriřim telekomünikasyon sistemlerinin kullanım kriterleri", II. URSI-Türkiye'2004 Bilimsel Kongresi, Bilkent Üniversitesi, Ankara, Türkiye, Eylül 2004. URSI-Türkiye'2004, İkinci Ulusal Kongresi Kitapçığı, 158-160, 08-10 Sept. 2004.
- 22) Halil T. Eyyubođlu and Yahya Baykal, "Analysis of reciprocity of cos-Gaussian and cosh-Gaussian laser beams in turbulent atmosphere", *Optics Express*, 12, 4659-4674, 04 Oct. 2004.
- 23) Yahya Baykal, Halil T. Eyyubođlu and Yusuf E. Yenice, "Reduction of scintillations in high rate long distance free space optics communication links", ICIT 2004, Istanbul, Türkiye, 17 – 19 December 2004. Proceedings of ICIT 2004, 55-58, Dec. 2004.
- 24) Yahya Baykal, "Rate averaging in free space optics systems using incoherent sources", *Atmospheric and Ocean Optics*, 18, 27-31, Jan.-Feb. 2005.
- 25) Halil T. Eyyubođlu and Yahya Baykal, "Average intensity and spreading of cosh-Gaussian laser beams in the turbulent atmosphere", *Applied Optics*, 44, 976-983, 20 Feb. 2005.
- 26) Yahya Baykal, "Log-amplitude and phase fluctuations of higher-order annular laser beams in a turbulent medium", *J. Opt. Soc. Am. A*, 22 (4), 672-679, Apr. 2005.
- 27) Halil T. Eyyubođlu and Yahya Baykal, "Analysis of laser multimode content on the angle-of-arrival fluctuations in free space optics access systems", *Optical Engineering*, 44(5), 056002-1, 056002-6, May 2005.
- 28) Yusuf E. Yenice, Halil T. Eyyubođlu and Yahya Baykal, "Propagation of cross beams through atmospheric turbulence", SPIE, XII Joint International Symposium on Atmospheric and Ocean Optics / Atmospheric Physics, Tomsk, Russia, 27 - 30 June 2005. SPIE Proc. G. A. Zherebtsov and G. G. Matvienko, Editors, 6160, 61601D-1, 61601D-9, Apr. 2006.
- 29) Yahya Baykal, Halil T. Eyyubođlu and Yusuf E. Yenice, "Off-axis Gaussian beams with random displacement in atmospheric turbulence", CITSA 2005, 2nd International Conference on Cybernetics and Information Technologies, Systems and Applications (CITSA 2005) and the 11th International Conference on Information Systems Analysis and Synthesis (ISAS 2005) joint Conference, Orlando, USA, 14 - 17 July 2005. Proceedings of CITSA 2005, 136-140, July 2005.
- 30) Halil T. Eyyubođlu and Yahya Baykal, "Hermite-sine-Gaussian and Hermite-sinh-Gaussian laser beams in turbulent atmosphere", *J. Opt. Soc. Am. A*, 22, 2709-2718, Dec. 2005.
- 31) Halil T. Eyyubođlu, Yusuf E. Yenice and Yahya Baykal, "Higher order annular Gaussian laser beam propagation in free space", *Optical Engineering*, 45(3), 038002-1, 038002-8, Mar. 2006.
- 32) Yahya Baykal, "Formulation of correlations for general-type beams in atmospheric turbulence", *J. Opt. Soc. Am. A*, 23 (4), 889-893, Apr. 2006.
- 33) Yahya Baykal and Halil T. Eyyubođlu, "Effect of source spatial partial coherence on the angle-of-arrival fluctuations for free space optics links" *Optical Engineering*, 45(5), 056001-1, 056001-6, May 2006.

- 34) Halil T. Eyyubođlu, Çađlar Arpali and Yahya Baykal, "Flat topped beams and their characteristics in turbulent media", Optics Express, 14, 4196-4207, 15 May 2006.
- 35) Yahya Baykal and Halil T. Eyyubođlu, "Scintillation index of flat-topped Gaussian beams", Applied Optics, 45, 3793-3797, 01 June 2006.
- 36) Yahya Baykal, "Telecom infrastructure", invited lecture, SPIE (The International Society for Optical Engineering) Student Chapter, presented at "The Institute of Atmospheric Optics of the Siberian Branch of the Russian Academy of Sciences, Tomsk, Russia", 04 July 2006.
- 37) Halil T. Eyyubođlu, Serap Altay and Yahya Baykal, "Propagation characteristics of higher-order annular Gaussian beams in atmospheric turbulence", Opt. Commun., 264, 25-34, 01 August 2006.
- 38) Halil T. Eyyubođlu, Yahya Baykal and Emre Sermutlu, "Convergence of general beams into Gaussian intensity profiles after propagation in turbulent atmosphere", Opt. Commun., 265, 399-405, 15 Sept. 2006.
- 39) Yahya Baykal, "Beams with arbitrary field profiles in turbulence", (invited) SPIE, XIII International Symposium on Atmospheric and Ocean Optics. Atmospheric Physics, Tomsk, Russia, 02 – 07 July 2006. SPIE Proc. Gennadii G. Matvienko, Victor A. Banakh, Editors, 6522, 652209-1, 652209-12, Nov. 2006.
- 40) Yahya Baykal, "Intensity fluctuations for source arrays in turbulent atmosphere", SPIE, Conference on SPIE Symposium on Optics & Photonics, Atmospheric Optical Modeling, Measurement, and Simulation II, San Diego, California, USA, 13-17 August 2006. SPIE Proc. S. M. Hammel and A. Kohnle, Editors, 6303, 630308-1, 630308-12, 2006.
- 41) Çađlar Arpali, Serap A. Arpali, Canan Yazıcıođlu, Halil T. Eyyubođlu ve Yahya Baykal, "Yüksek dereceli halkasal Gauss ve düz tepeli ışık hüzmelerinin türbülanslı atmosferde yayılım özellikleri", 3. URSI-Türkiye'2006 Bilimsel Kongresi, Hacettepe Üniversitesi, Ankara, Türkiye, Sept. 2006. URSI-Türkiye 2006, 3. Bilimsel Kongresi Kitapçıđı, 256-258, 06-08 Sept. 2006.
- 42) Jale Küçükünsal ve Yahya Baykal, "Kablosuz haberleşme teknolojisi Wimax'de dünyadaki durum", 3. URSI-Türkiye'2006 Bilimsel Kongresi, Hacettepe Üniversitesi, Ankara, Türkiye, Sept. 2006. URSI-Türkiye 2006, 3. Bilimsel Kongresi Kitapçıđı, 577-579, 06-08 Sept. 2006.
- 43) Sırrı T. Dedeođlu ve Yahya Baykal, "Farklı yapılarla indirgenebilen genel profilli ışık kaynađı hüzmelerinin boşlukta yayılmasıyla oluşan ışık şiddeti", 3. URSI-Türkiye'2006 Bilimsel Kongresi, Hacettepe Üniversitesi, Ankara, Türkiye, Sept. 2006. URSI-Türkiye 2006, 3. Bilimsel Kongresi Kitapçıđı, 323-325, 06-08 Sept. 2006.
- 44) Çađlar Arpali, Canan Yazıcıođlu, Halil T. Eyyubođlu, Serap A. Arpali, and Yahya Baykal, "Simulator for general-type beam propagation in turbulent atmosphere", Optics Express, 14, 8918-8928, 02 Oct. 2006.
- 45) Yahya Baykal and Halil T. Eyyubođlu, "Off-axis-Gaussian beam intensity in random medium", Opt. Commun., 269, 30-38, 01 January 2007.
- 46) Halil T. Eyyubođlu and Yahya Baykal, "Scintillations of cos-Gaussian and annular beams", J. Opt. Soc. Am. A, 24, 156-162, January 2007.

- 47) Yahya Baykal, Halil T. Eyyuboğlu, and Yusuf E. Yenice, "Off-axis Gaussian beams with random displacement in atmospheric turbulence", *Journal of Systemics, Cybernetics and Informatics*, 4(5), 2006.
- 48) Halil T. Eyyuboğlu and Yahya Baykal, "Scintillation characteristics of cosh-Gaussian beams", *Applied Optics*, 46, 1099-1106, 1 March 2007.
- 49) Halil T. Eyyuboğlu and Yahya Baykal, "Generalized beams in *ABCDGH* systems", *Opt. Commun.*, 272, 22-31, April 2007.
- 50) Yahya Baykal, "Structure functions in turbulence for incidence with arbitrary field distribution", *J. Opt. Soc. Am. A*, 24, 6, 1726-1730, June 2007.
- 51) Yahya Baykal and Halil T. Eyyuboğlu, "Intensity fluctuations of focused general-type beams in atmospheric optics links", SPIE, Conference on Fluctuations and Noise, Florence, Italy, 20-24 May 2007. SPIE Proc. L. Cohen, Editor, 6603, 660320-1, 660320-8, 2007.
- 52) Yahya Baykal, Halil T. Eyyuboğlu, and Yangjian Cai, "Incoherent sinusoidal-Gaussian and annular beam scintillations", SPIE, XIV International Symposium on Atmospheric and Ocean Optics. Atmospheric Physics, Buryatia, Russia, 24-30 June 2007. SPIE Proc. G. G. Matvienko and V. A. Banakh, Editors, 6936, 69360B-1, 69360B-10, 2008.
- 53) Halil T. Eyyuboğlu and Yahya Baykal, "Angle-of-arrival fluctuations for general-type beams", *Opt. Eng.*, 46 (9), 096001-1, 096001-8, Sept. 2007.
- 54) Serap A. Arpali, Halil T. Eyyuboğlu, and Yahya Baykal, "Scintillation index of higher order cos-Gaussian, cosh-Gaussian and annular beams", *J. Modern Opt.*, 55 (2), 227-239, Jan. 2008.
- 55) Yangjian Cai, Yuntian Chen, Halil T. Eyyuboğlu, and Yahya Baykal, "Propagation of laser array beams in a turbulent atmosphere", *Applied Physics B: Lasers and Optics*, 88 (3), 467-475, Aug. 2007.
- 56) Yahya Baykal and Halil T. Eyyuboğlu, "Scintillations of incoherent flat-topped Gaussian source field in turbulence", *Applied Optics*, 46, 22, 5044-5050, 1 Aug. 2007.
- 57) Halil T. Eyyuboğlu, Yahya Baykal, and Yangjian Cai, "Complex degree of coherence for partially coherent general beams in atmospheric turbulence", *J. Opt. Soc. Am. A*, 24 (9), 2891-2901, Sept. 2007.
- 58) Yangjian Cai, Qiang Lin, Yahya Baykal, and Halil T Eyyuboğlu, "Off-axis Gaussian Schell-model beam and partially coherent laser array beam in a turbulent atmosphere", *Opt. Commun.*, 278 (1), 157-167, 1 Oct. 2007.
- 59) Halil T. Eyyuboğlu and Yahya Baykal, "Transmittance of partially coherent cosh-Gaussian, cos-Gaussian and annular beams in turbulence", *Opt. Commun.*, 278 (1), 17-22, 1 Oct. 2007.
- 60) Yangjian Cai, Yuntian Chen, Halil T. Eyyuboğlu, and Yahya Baykal, "Scintillation index of elliptical Gaussian beam in a turbulent atmosphere", *Opt. Lett.* 32 (16), 2405-2407, Aug. 15, 2007.

- 61) Halil T. Eyyubođlu, Yahya Baykal, and Yangjian Cai, "Degree of polarization for partially coherent general beams in turbulent atmosphere", *Appl. Phys. B*, 89 (1), 91–97, Oct. 2007.
- 62) Yangjian Cai, Halil T. Eyyubođlu, and Yahya Baykal, "Propagation of anomalous hollow beams in a turbulent atmosphere", *Progress in Electromagnetics Research Symposium (PIERS) 2008*, Hangzhou, China, 24-28 March 2008.
- 63) Yahya Baykal, Halil T. Eyyubođlu, and Yangjian Cai, "Formulation of scintillations for optical incidence of arbitrary field profile", *Progress in Electromagnetics Research Symposium (PIERS) 2008*, Hangzhou, China, 24-28 March 2008. *Progress In Electromagnetics Research Symposium*, Hangzhou, China, 779-782, March 24-28, 2008.
- 64) Halil T. Eyyubođlu, Yahya Baykal, and Yangjian Cai, "Propagation of partially coherent beams after a source plane ring aperture", *Progress in Electromagnetics Research Symposium (PIERS) 2008*, Hangzhou, China, 24-28 March 2008. *Progress In Electromagnetics Research Symposium*, Hangzhou, China, 783-789, March 24-28, 2008.
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- 66) Yuntian Chen, Yangjian Cai, Halil T. Eyyubođlu, and Yahya Baykal, "Scintillation properties of dark hollow beams in a weak turbulent atmosphere", *Applied Physics B - Lasers and Optics*, 90 (1), 87-92, Jan. 2008.
- 67) H. T. Eyyubođlu, Y. Cai, and Y. K. Baykal, "Spectral shifts of general beams in turbulent media", *J. Opt. A*, 10 (1), 015005, 1-6, January 2008.
- 68) H. T. Eyyubođlu, Y. Baykal, and Y. Cai, "Scintillations of laser array beams", *Applied Physics B*, 91 (2), 265-271, May 2008.
- 69) Yangjian Cai, Xiang Lü, Halil T. Eyyubođlu and Yahya Baykal, "Paraxial propagation of a partially coherent flattened Gaussian beam through apertured ABCD optical systems", *Opt. Commun.*, 281(12), 3221–3229, 15 June 2008.
- 70) Yahya Baykal, "Kablosuz optik haberleşmenin bugünü ve geleceđi", Çankaya Üniversitesi, 1. Mühendislik ve Teknoloji Sempozyumu, Ankara, Türkiye, 24-25 Apr. 2008. Çankaya Üniversitesi, 1. Mühendislik ve Teknoloji Sempozyumu Kitapçığı, 129-135, 24-25 Nisan 2008.
- 71) Çađlar Arpali ve Yahya Baykal, "Dilemsel (Arbitrary) ışık hüzmelerinin boşlukta yayılmasıyla oluşan ışık şiddeti", Çankaya Üniversitesi, 1. Mühendislik ve Teknoloji Sempozyumu, Ankara, Türkiye, 24-25 Apr. 2008. Çankaya Üniversitesi, 1. Mühendislik ve Teknoloji Sempozyumu Kitapçığı, 120-128, 24-25 Nisan 2008.
- 72) Yangjian Cai, Halil T. Eyyubođlu, and Yahya Baykal, "Scintillation of astigmatic dark hollow beams in a weak turbulent atmosphere", *J. Opt. Soc. Am. A*, 25 (7), 1497-1503, July 2008.
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- 75) Halil T. Eyyuboğlu, Yahya Baykal, Emre Sermutlu, and Yangjian Cai, "Scintillation advantages of lowest order Bessel-Gaussian beams", *Applied Physics B - Lasers and Optics*, 92 (2), 229-235, Aug 2008.
- 76) Yangjian Cai, Halil T. Eyyuboğlu, and Yahya Baykal, "Propagation properties of anomalous hollow beams in a turbulent atmosphere", *Opt. Commun.* 281 (21), 5291–5297, 1 Nov 2008.
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- 81) Çağlar Arpali and Yahya Baykal "Average received intensity for optical beam of arbitrary field profile after propagation in turbulent atmosphere", *SPIE Symposium on LASE: Lasers and Applications in Science and Engineering, Atmospheric Propagation of Electromagnetic Waves III*, San Jose, CA, USA, 24-29 Jan. 2009. *SPIE Proc. O. Korotkova, Editor*, 7200, 720006-1, 720006-11, 2009.
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