

Publications for Javid Atai

2017

Ahmed, T., Atai, J. (2017). Bragg solitons in systems with separated nonuniform Bragg grating and nonlinearity. *Physical Review E*, 96(3), 1-8. [More Information]

Islam, M., Sultana, J., Atai, J., Islam, M., Abbott, D. (2017). Design and characterization of a low-loss, dispersion-flattened photonic crystal fiber for terahertz wave propagation. *Optik/ Optics: International Journal for Light and Electron Optics*, 145, 398-406. [More Information]

Chowdhury, S., Atai, J. (2017). Moving Bragg grating solitons in a semilinear dual-core system with dispersive reflectivity. *Scientific Reports*, 7(1), 1-12. [More Information]

Sultana, J., Islam, M., Atai, J., Islam, M., Abbott, D. (2017). Near-zero dispersion flattened, low-loss porous-core waveguide design for terahertz signal transmission. *Optical Engineering*, 56(7), 1-5. [More Information]

Jahirul Islam, M., Atai, J. (2017). Stability of Bragg grating solitons in a semilinear dual-core system with cubic-quintic nonlinearity. *Nonlinear Dynamics*, 87(3), 1693-1701. [More Information]

Islam, M., Sultana, J., Atai, J., Abbott, D., Rana, S., Islam, M. (2017). Ultra low-loss hybrid core porous fiber for broadband applications. *Applied Optics*, 56(4), 1232-1237. [More Information]

2016

Farhadi, H., Atai, J., Skoglund, M., Nadimi, E., Pahlavan, K., Tarokh, V. (2016). An adaptive localization technique for wireless capsule endoscopy. *2016 10th International Symposium on Medical Information and Communication Technology (ISMICT)*, Piscataway: (IEEE) Institute of Electrical and Electronics Engineers. [More Information]

Jahirul Islam, M., Atai, J. (2016). Dynamics of Interacting Bragg Grating Solitons in a Semilinear Dual-core System with Cubic-quintic Nonlinearity. *4th International Conference on Photonics, Optics and Laser Technology (PHOTOPTICS 2016)*, Portugal: SciTePress. [More Information]

Ahmed, T., Atai, J. (2016). Effect of Dispersive Reflectivity on the Stability of Gap Solitons in Systems with Separated Bragg Grating and Nonlinearity. *4th International Conference on Photonics, Optics and Laser Technology (PHOTOPTICS 2016)*, Portugal: SciTePress. [More Information]

Chowdhury, S., Atai, J. (2016). Interaction dynamics of Bragg

grating solitons in a semilinear dual-core system with dispersive reflectivity. *Journal of Modern Optics*, 63(21), 2238-2245. [More Information]

Islam, M., Atai, J. (2016). Interaction Dynamics of Gap Solitons in Dual-Core Bragg Gratings With Cubic-Quintic Nonlinearity. *IEEE Journal of Quantum Electronics*, 52(5), 1-8. [More Information]

2015

Farhadi, H., Nadimi, E., Atai, J., Pahlavan, K., Skoglund, M., Tarokh, V. (2015). A novel adaptive localization technique for wireless capsule endoscopy. *Society of American Gastrointestinal and Endoscopic Surgeons Conference (SAGES 2015)*, USA: Springer. [More Information]

Islam, M., Atai, J. (2015). Bragg grating solitons in semilinear dual-core system with cubic-quintic nonlinearity. *3rd International Conference on Photonics, Optics and Laser Technology (PHOTOPTICS 2015)*, Berlin: SciTePress. [More Information]

Chowdhury, S., Atai, J. (2015). Collisions of Bragg grating solitons in a semilinear dual-core system with dispersive reflectivity. *2015 IEEE Photonics Conference (IPC 2015)*, Piscataway, New Jersey: IEEE. [More Information]

Baratali, B., Atai, J. (2015). Dynamics of moving gap solitons in linearly coupled Bragg gratings with dispersive reflectivity. *Journal of the Optical Society of America B*, 32(7), 1309-1317. [More Information]

Cao, H., Shu, X., Atai, J., Zuo, J., Xiong, B., Shen, F., Liu, X., Cheng, J. (2015). Fiber Bragg grating based notch filter for bitrate-transparent NRZ to PRZ format conversion with two-degree-of-freedom optimization. *Journal of Optics*, 17(2), 1-7. [More Information]

Islam, M., Atai, J. (2015). Moving gap solitons in coupled Bragg gratings with cubic-quintic nonlinearity. *2015 IEEE Photonics Conference (IPC 2015)*, Piscataway, New Jersey: IEEE. [More Information]

Cao, H., Atai, J., Zuo, J., Yu, Y., Gbadebo, A., Xiong, B., Hou, J., Liang, P., Gao, Y., Shu, X. (2015). Simultaneous multichannel carrier-suppressed return-to-zero to non-return-to-zero format conversion using a fiber Bragg grating. *Applied Optics*, 54(20), 6344-6350. [More Information]

Islam, M., Atai, J. (2015). Stability of gap solitons in dual-core Bragg gratings with cubic-quintic nonlinearity. *Laser Physics Letters*, 12(1), 1-7. [More Information]

2014

Cao, H., Atai, J., Yu, Y., Xiong, B., Zhou, Y., Cai, J., Shu, X. (2014). Carrier-suppressed return-to-zero to non-return-to-zero format conversion based on a single fiber Bragg grating with knife-shaped spectra. *Applied Optics*, 53(25), 5649-5653. [More Information]

Chowdhury, S., Atai, J. (2014). Dynamics of Bragg grating solitons in grating-assisted couplers with dispersive reflectivity. *2014 IEEE Photonics Conference, IPC 2014*, Piscataway, USA: (IEEE) Institute of Electrical and Electronics Engineers. [More Information]

Islam, M., Atai, J. (2014). Interactions of gap solitons in coupled Bragg gratings with cubic-quintic nonlinearity. *2014 IEEE Photonics Conference, IPC 2014*, Piscataway, USA: (IEEE) Institute of Electrical and Electronics Engineers. [More Information]

Cao, H., Atai, J., Yu, Y., Dong, Q., Zuo, J., Chen, G., Shu, X. (2014). Multi-channel RZ to NRZ Format Conversion Based on a Single Fiber Bragg Grating. *Progress In Electromagnetics Research Symposium (PIERS 2014)*, United States: Electromagnetics Academy.

Cao, H., Shu, X., Atai, J., Gbadebo, A., Xiong, B., Fan, T., Tang, H., Yang, W., Yu, Y. (2014). Optimally-designed single fiber Bragg grating filter scheme for RZ-OOK/DPSK/DQPSK to NRZ-OOK/DPSK/DQPSK format conversion. *Optics Express*, 22(25), 30442-30460. [More Information]

Cao, H., Shu, X., Atai, J., Dong, Q., Zuo, J., Chen, G., Yu, Y. (2014). RZ-OOK to NRZ-OOK format conversion based on a single fiber Bragg grating. *Chinese Optics Letters*, 12(9), 1-4. [More Information]

Chowdhury, S., Atai, J. (2014). Stability of Bragg Grating Solitons in a Semilinear Dual Core System With Dispersive Reflectivity. *IEEE Journal of Quantum Electronics*, 50(6), 458-465. [More Information]

2013

Chowdhury, S., Atai, J. (2013). Bragg Grating Solitons in Semilinear Couplers with Dispersive Reflectivity. *Progress in Electromagnetics Research Symposium (PIERS 2013) Taipei*, Cambridge, MA: The Electromagnetics Academy.

Baratali, B., Atai, J. (2013). Dynamics of interacting solitons in dual core Bragg gratings with dispersive reflectivity. *Journal of Applied Physics*, 114(15), 1-5. [More Information]

Dasanayaka, S., Atai, J. (2013). Families of moving Bragg grating solitons in cubic-quintic nonlinear media with dispersive reflectivity. *26th IEEE Photonics Conference, IPC 2013*, Piscataway, New Jersey, United States of America: (IEEE) Institute of Electrical and Electronics Engineers. [More Information]

Islam, M., Atai, J. (2013). Gap Solitons in Coupled Bragg Gratings with Cubic-quintic Nonlinearity. *Progress in Electromagnetics Research Symposium (PIERS 2013) Stockholm*, Cambridge, USA: The Electromagnetics Academy.

Dasanayaka, S., Atai, J. (2013). Moving Bragg grating solitons in a cubic-quintic nonlinear medium with dispersive reflectivity. *Physical Review E*, 88(2), 1-9. [More Information]

Baratali, B., Atai, J. (2013). Moving gap solitons in coupled Bragg gratings with dispersive reflectivity. *26th IEEE Photonics Conference, IPC 2013*, Piscataway, New Jersey, United States of America: (IEEE) Institute of Electrical and Electronics Engineers. [More Information]

Dasanayaka, S., Atai, J. (2013). Stability and collisions of moving Bragg grating solitons in a cubic-quintic nonlinear medium. *Journal of the Optical Society of America B*, 30(2), 396-404. [More Information]

2012

Cao, H., Atai, J., Shu, X., Liang, P., Chen, G. (2012). Design of high channel-count fiber Bragg gratings using tailored group delay. *Frontiers in Optics 2012/Laser Science XXVIII*, Washington DC: Optical Society of America.

Cao, H., Atai, J., Shu, X., Chen, G. (2012). Direct design of high channel-count fiber Bragg grating filters with low index modulation. *Optics Express*, 20(11), 12095-12110. [More Information]

Dasanayaka, S., Atai, J. (2012). Dynamics of moving Bragg grating solitons in cubic-quintic nonlinear media. *2012 IEEE Photonics Conference (IPC)*, Burlingame: (IEEE) Institute of Electrical and Electronics Engineers. [More Information]

Baratali, B., Atai, J. (2012). Gap solitons in dual-core Bragg gratings with dispersive reflectivity. *Journal of Optics*, 14(6), 1-8. [More Information]

Baratali, B., Atai, J. (2012). Interactions of gap solitons in linearly coupled Bragg gratings with dispersive reflectivity. *2012 IEEE Photonics Conference (IPC)*, Burlingame: (IEEE) Institute of Electrical and Electronics Engineers. [More Information]

2011

Hajibaratali, B., Atai, J. (2011). Gap solitons in coupled Bragg Gratings with Dispersive Reflectivity. *2011 IEEE Photonics Conference (PHO 2011)*, Arlington, Virginia, USA: (IEEE) Institute of Electrical and Electronics Engineers. [More Information]

Dasanayaka, S., Atai, J. (2011). Interactions of solitons in Bragg gratings with dispersive reflectivity in a cubic-quintic medium. *Physical Review E*, 84, 026613-1-026613-8. [More Information]

Minasian, A., Bird, T., Atai, J. (2011). Particle Swarm Antennas for Wireless Communication Systems. *The 5th European Conference on Antennas and Propagation (EUCAP)*, Rome, Italy: (IEEE) Institute of Electrical and Electronics Engineers.

2010

Neill, D., Atai, J. (2010). Interaction Dynamics of Solitons in a Linearly Coupled Ginzburg-Landau Equation with Cubic-quintic Nonlinearity. *Progress in Electromagnetics Research 2010*, Cambridge, Massachusetts, USA: Electromagnetics Academy.

Salim, A., Carroll, S., Atai, J. (2010). Limits of intrusion detection systems in a gigabit optical link. *Optical Engineering*, 49(4), 045005-1-045005-4. [More Information]

Dasanayaka, S., Atai, J. (2010). Stability of Bragg Grating Solitons in a Cubic-quintic Nonlinear Medium with Dispersive Reflectivity. *Progress in Electromagnetics Research 2010*, Cambridge, Massachusetts, USA: Electromagnetics Academy.

Dasanayaka, S., Atai, J. (2010). Stability of Bragg grating solitons in a cubic-quintic nonlinear medium with dispersive reflectivity. *Physics Letters. Section A: General, Atomic and Solid State Physics*, 375(2), 225-229. [More Information]

2009

Carroll, S., Atai, J. (2009). Collision dynamics of solitons in a multi-channel stabilized dispersion managed link. *Journal of Optics A: Pure and Applied Optics*, 11(8), 1-7. [More Information]

Neill, D., Atai, J. (2009). Solitons in an asymmetric linearly coupled Ginzburg-Landau equation with a cubic-quintic nonlinearity. *12th International Symposium on Microwave and Optical Technology ISMOT 2009*, India: Macmillan Press.

2008

Neill, D., Atai, J., Malomed, B. (2008). Dynamics and collisions of moving solitons in Bragg gratings with dispersive reflectivity. *Journal of Optics A: Pure and Applied Optics*, 10(8), 085105-1-085105-6. [More Information]

Atai, J., Neill, D. (2008). Dynamics and Interactions of Gap Solitons in Hollow Core Photonic Crystal Fibers. In Jurgen C. Schlesinger (Eds.), *Optical Fibers Research Advances*, (pp. 315-333). New York, USA: Nova Science Publishers.

Li, Y., Atai, J. (2008). Stability and Interactions of Moving Bragg Grating Solitons in a Semi-Dual Core System. *Progress in Electromagnetics Research Symposium (PIERS 2008 Cambridge)*, Cambridge, Massachusetts, USA: Electromagnetics Academy.

Neill, D., Atai, J., Malomed, B. (2008). The Effect of Reflectivity Dispersion on Gap Solitons in a Bragg Grating. *Progress in Electromagnetics Research Symposium (PIERS 2008 Cambridge)*, Cambridge, Massachusetts, USA: Electromagnetics Academy.

2007

Neill, D., Atai, J. (2007). Gap Solitons in a Hollow Optical Fiber in the Normal Dispersion Regime. *Physics Letters. Section A: General, Atomic and Solid State Physics*, 367(1-2), 73-82. [More Information]

Carroll, S., Atai, J. (2007). Interaction of Solitons in a Stabilized Dispersion Managed Link. *Journal of the Optical*

Society of America B, 24(5), 1160-1165. [More Information]

2006

Neill, D., Atai, J. (2006). Collision dynamics of gap solitons in Kerr media. *Modern Physics Letters A*, 353(5), 416-421. [More Information]

Atai, J., Malomed, B., Merhasin, I. (2006). Stability and collisions of gap solitons in a model of a hollow optical fiber. *Optics Communications*, 265(1), 342-348. [More Information]

2005

Minasian, R., Chan, E., You, N., Chen, J., Yi, X., Atai, J. (2005). Fibre Bragg Grating Microwave Photonic Signal Processors. *BGPP/ ACOFT 2005 : OSA Topical Meeting on Bragg Gratings, Poling & Photosensitivity (BGPP) / 30th Australian Conference on Optical Fibre Technology (ACOFT) 2005*, Sydney: Tour Hosts Pty Ltd.

Atai, J., Malomed, B. (2005). Gap solitons in Bragg gratings with dispersive reflectivity. *Physics Letters. Section A: General, Atomic and Solid State Physics*, 342(5-6), 404-412. [More Information]

2004

Atai, J. (2004). Interaction Of Bragg Grating Solitons In A Cubic-Quintic Medium. *Journal of Optics B: Quantum and Semiclassical Optics*, 6(5), S177-S181. [More Information]

2003

Atai, J., Malomed, B. (2003). Stability and interactions of solitons in asymmetric dual-core optical waveguides. *Optics Communications*, 221(1-3), 55-62. [More Information]

2002

Nistazakis, H., Frantzeskakis, D., Atai, J., Malomed, B., Efremidis, N., Hizanidis, K. (2002). Multichannel pulse dynamics in a stabilized Ginzburg-Landau system. *Physical Review E*, 65(3), 036605-1-036605-12. [More Information]

Atai, J., Malomed, B. (2002). Spatial solitons in a medium composed of self-focusing and self-defocusing layers. *Physics Letters. Section A: General, Atomic and Solid State Physics*, 298(2-3), 140-148. [More Information]

2001

Atai, J., Malomed, B. (2001). Bragg-grating solitons in dual-core semi-linear systems. In Fatkhulla Abdullaev, Ole Bang & Mads Peter Sorensen (Eds.), *Nonlinearity and Disorder: Theory and Applications: Proceedings of the NATO Advanced Research Workshop, Tashkent, Uzbekistan, 2-6 October 2001*, (pp. 307-313). United Kingdom: Springer.

Atai, J., Malomed, B. (2001). Families of Bragg-grating solitons in a cubic-quintic medium. *Physics Letters. Section A: General, Atomic and Solid State Physics*, 284(6), 247-252. [More Information]

[http://dx.doi.org/10.1016/S0375-9601\(01\)00314-0](http://dx.doi.org/10.1016/S0375-9601(01)00314-0)>[More Information]

Atai, J., Malomed, B. (2001). Solitary waves in systems with separated Bragg grating and nonlinearity. *Physical Review E*, 64. <a

<http://dx.doi.org/10.1103/PhysRevE.64.066617>>[More Information]