

Professional Associate Professor

Experience MICA – The School of Ideas, Ahmedabad, Gujarat, India.

Principal Consultant

Infosys Limited, Bangalore, Karnataka, India

Head – PGPX and New Programmes

Indian Institute of Management Ahmedabad, Gujarat, India

Scientist / Principal Investigator / Program Manager

HRL Laboratories (Boeing, General Motors, and Raytheon), Malibu, California, USA

one of world's premier physical science and engineering research laboratories credited with several of world's first technological inventions and demonstrations

Research Associate

Mobile and Portable Radio Research Group, Blacksburg, Virginia, USA

Engineer

TATA Telecom Limited, Gandhinagar, Gujarat, India

national leader in R&D, manufacturing, and deployment of high-technology telecom equipment

Education Indian Institute of Management Ahmedabad, Gujarat, India

Doctor of Philosophy (PhD) Programme in Management

Indian Institute of Management Ahmedabad, Gujarat, India

Post Graduate Programme in Management for Executives (PGPX)

Graduated among top 10 students of the class

Virginia Polytechnic Institute and State University, Virginia, USA

M.S. in Electrical and Computer Engineering

Graduated Summa Cum Laude

L. D. College of Engineering, Gujarat University, Gujarat, India

B.E. in Electronics and Communications Engineering

University First Rank; Three University Gold Medals; Medal of Merit by Institution of Engineers, India

Granted Patents 1. Kukshya, V., & Owechko, Y. (2016) Blind Beamforming Using Knowledge Embedded in Transmitted Signals. USPTO 9,270,354.

2. Kukshya, V., Song, H. J., Hsu, H. P., & Wiese, R. (2014) Schemes and Algorithms to Reduce Energy and Hardware Costs of Tire Pressure Monitoring Systems. USPTO 8,902,056.

3. Kukshya, V., Matic, R., Petre, P., & Gerwe, D. R. (2014) Technique to Increase Speed of Asynchronous Pulse Processing Based Hyperspectral Target Detection Algorithm. USPTO 8,755,564.

4. Kellum, C. C., Chiz, M. H., Krishnan, H., Parikh J. S., & Kukshya, V. (2013) Determining Relative Spatial Information between Vehicles. USPTO 8,401,713.

5. Kukshya, V., Cruz-Albrecht, J., Matic, R., Petre, P., Wolboldt, M., & Gerwe, D. R. (2012) Advanced Background Estimation Technique and Circuit for Hyperspectral Target Detection. USPTO 8,280,111.

6. Kellum, C. C., Chiz, M. H., Krishnan, H., Parikh J. S., & Kukshya, V. (2011) Determining Relative Spatial Information between Vehicles. USPTO 8,041,469.

7. Kukshya, V., Song, H. J., Hsu, H. P., & Wiese, R. (2011) Tire Pressure Monitoring System and Method of Operating the Same. USPTO 7,994,905.

Trade Secret & Defensive Publications 1. Kukshya, V., Song, H. J., Hsu, H. P., & Wiese, R. (2007) Tire Pressure Monitoring System Emulator and Performance Prediction Tool, filed as a trade secret.

2. Kukshya, V., Song, H. J., Hsu, H. P., & Wiese, R. (2006) Reconfigurable and Dynamically Adaptable Tire Pressure Monitoring System, filed as a defensive publication.

3. Kukshya, V., Krishnan, H., & Kellum, C. C. (2004) Algorithm and Techniques for Enabling Inter-Vehicular Communication Based Collision Warning During Partial GPS Outages, filed as a defensive publication.

4. Kukshya, V., Hsu, H. P., & Talty, T. (2003) Hybrid Optical Network Architecture Supporting High Speed Information Access Management and Distribution in Mobile Vehicles, filed as a defensive publication.

5. Tangonan, G., Sievenpiper, D., Hsu, H. P., Song, H. J., & Kukshya, V. (2001) Quality of Service Monitoring of Wireless Communications for Auto Safety, filed as a defensive publication.

- Refereed Journal Publications**
1. Xu, H., **Kukshya, V.**, & Rappaport, T. S. (2002) Spatial and Temporal Characteristics of 60 GHz Indoor Channels. *IEEE Journal on Selected Areas in Communications*, 20(3): 620-630. (*ABDC-equivalent A**, *SJR Rank A**, *ERA Rank A**, *Impact Factor ~ 17*)
 2. Izadpanah, H., Elbatt, T., **Kukshya, V.**, Dolezal, F., & Ryu, B. (2003) High-Availability Free Space Optical and RF Hybrid Wireless Networks. *IEEE Wireless Communication*, 10(2): 45-53. (*ABDC-equivalent A**, *SJR Rank A**, *ERA Rank A**, *Impact Factor ~ 11.5*)
 3. Durgin, G., **Kukshya, V.**, & Rappaport, T. S. (2003) Wideband Measurements of Angle & Delay Dispersion for Outdoor and Indoor Peer-to-Peer Radio Channels at 1920 MHz. *IEEE Transactions on Antennas and Propagation*, 51(5): 936-944. (*ABDC-equivalent A*, *SJR Rank A*, *ERA Rank A**, *Impact Factor ~ 5.8*)
 4. Kong, X., Matic, R., Xu, Z., **Kukshya, V.**, Petre, P., & Jensen, J. (2012) A Time-Encoding Machine Based High-Speed Analog-to-Digital Converter. *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, 2(3): 552-563. (*ABDC-equivalent A*, *SJR Rank A*, *ERA Rank A*, *Impact Factor ~ 3.8*)
 5. Litkouhi, B. B., Owechko, Y., **Kukshya, V.**, & Rajavel, R. (2012) Imaging Sensor Technology for Intelligent Vehicle Active Safety and Driver Assistant Systems. *International Journal of Vehicle Autonomous Systems*. 10(3): 198-228.

- Refereed Conference Publications**
1. **Kukshya, V.**, Song, H. J., Hsu, H. P., & Wiese, R. (2007) Characterizing Performance of Tire Pressure Monitoring Systems Using Experimental Measurements & System Simulations. *Proceedings of 2007 IEEE Antennas and Propagation Society International Symposium*.
 2. **Kukshya, V.**, Song, H. J., & Wiese, R. (2007) Impact of Inter-Vehicular Interference on the Performance of Tire Pressure Monitoring Systems. *Proceedings of 2007 IEEE 66th Vehicular Technology Conference*.
 3. **Kukshya, V.**, Song, H. J., Hsu, H. P., & Wiese, R. (2007) Impact of Intra-Vehicular Electromagnetic Interference on Tire Pressure Monitoring Systems. *Proceedings of 2007 IEEE International Symposium on Electromagnetic Compatibility*.
 4. **Kukshya, V.** & Krishnan, H. (2006) Experimental Measurements and Modeling for Vehicle-to-Vehicle Dedicated Short Range Communication (DSRC) Wireless Channels. *Proceedings of IEEE Vehicular Technology Conference*.
 5. **Kukshya, V.** & Kellum, C. (2006) Performance Evaluation of a System for Estimating Relative Positions of Vehicles During GPS Outages. *Proceedings of 2006 IEEE Intelligent Vehicles Symposium*.
 6. **Kukshya, V.**, Krishnan, H., & Kellum, C. (2005) Design of a System Solution for Relative Positioning of Vehicles Using Vehicle-to-Vehicle Radio Communications during GPS Outages. *Proceedings of 2005 IEEE 62nd Vehicular Technology Conference*.
 7. **Kukshya, V.**, Izadpanah, H., & Tangonan, G. (2003) System Architecture and Techniques for Proactively Adapting Lasercom Systems. *Proceedings of SPIE Optical Networking & Communications Conference*.
 8. **Kukshya, V.**, Hsu, H. P., & Talty, T. (2003) Hardware Implementation Choices for Vehicular Telematics Systems and Simulation Results. *Proceedings of 2003 IEEE 58th Vehicular Technology Conference*.
 9. **Kukshya, V.**, Hsu, H. P., & Talty, T. (2003) Wireless System Choices for Next Generation Vehicular Telematics Systems. *Proceedings of MPRG Symposium on Wireless Personal Communications*.
 10. **Kukshya, V.**, Rappaport, T. S., Izadpanah, H., Tangonan, G., Guerrero, R., Mendoza, J., & Lee, B. (2002) Free-Space Optics and High-Speed RF for Next Generation Networks - Propagation Measurements. *Proceedings of IEEE 56th Vehicular Technology Conference*.
 11. **Kukshya, V.** & Izadpanah, H. (2002) High-Speed Optical Wireless Connectivity - Design Challenges and Performance Evaluation. *Proceedings of SPIE ITCOM Conference*.
 12. **Kukshya, V.** & Izadpanah, H. (2002) Smart Broadband Connectivity: Design Challenges & Performance Evaluation. *Proceedings of International Conference on Third Generation Wireless and Beyond*.
 13. Izadpanah, H., **Kukshya, V.**, & Dolezal, F. (2001) Access Network Technology for All Wireless WDM Communications System. *Proceedings of SPIE ITCOM Conference*.
 14. Durgin, G., **Kukshya, V.**, & Rappaport, T. S. (2001) Joint Angle and Delay Spread Statistics for 1920 MHz Peer-to-Peer Wireless Channels. *Proceedings of Antennas and Propagation Society Int. Symposium*.
 15. Xu, H., **Kukshya, V.**, & Rappaport, T. S. (2000) Spatial and Temporal Characteristics of 60 GHz Indoor Channels. *Proceedings of 2000 IEEE 52nd Vehicular Technology Conference Fall*.
 16. Xu, H., Rappaport, T. S., **Kukshya, V.**, & Izadpanah, H. (2000) Multipath Measurements and Modeling for Fixed Broadband Point-to-Multipoint Radio Wave Propagation Links under Different Weather Conditions. Published in IEEE 802.16 Broadband Wireless Access Working Group.