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Research Interests

Excitonics: understanding and controlling excitonic energy transport within/between nanoscale systems
Hybrid Heterointerfaces: energy transport at and across organic-inorganic heterointerfaces
Nanophotonic Devices: design and fabrication of nanoscale devices for on-chip optical interconnects
NEMS: opto-mechanical and electro-optical systems
Nanofabrication: exploring novel top down and bottom up approaches

Education

Harvard University [May 2012] Cambridge, MA
Ph.D. in Electrical Engineering. Thesis advisor: Dr. Marko Lončar.
Thesis title: Nanobeam cavities for reconfigurable photonics.
Texas A&M University [May 2007] College Station, TX
M.S in Electrical Engineering. Thesis advisor: Dr. Jun Kameoka.
Thesis title: Fabrication of organic and inorganic nanoparticles using electrospray.
University of Pune [June 2004] Pune, India
B.E. in Electrical Engineering.

Career History and Research Contributions

University of Michigan, Ann Arbor [Jan 2016 – Present] Ann Arbor, MI
Assistant Professor of Electrical Engineering and Computer Science
Assistant Professor of Applied Physics
Massachusetts Institute of Technology [May 2012 – Dec 2015] Cambridge, MA
Postdoctoral Associate (PI: Dr. Vladimir Bulović)
Harvard University [July 2007 – April 2012] Cambridge, MA
Graduate Research Assistant (Advisor: Dr. Marko Lončar)
Texas A&M University [Jan 2005 – May 2007] College Station, TX
Graduate Research Assistant (Advisor: Dr. Jun Kameoka)
Indian Institute of Technology, Bombay [July 2004 – Dec 2004] Mumbai, India
Research Staff (PI: Dr. Rakesh Lal)
Raman Research Institute, Bangalore [Summer 2003] Bangalore, India
Undergraduate Research Intern (PI: Dr. Ramesh Balasubramanyam)
Indian Institute of Technology, Bombay [Summer 2002] Mumbai, India
Undergraduate Research Intern (Dr. Vivek Agarwal)

Awards and Honors

Senior Member, Optical Society of America, 2019
Young Investigator Award, Air Force Office of Scientific Research, 2017
2017 HKN Professor of the year in ECE, University of Michigan
Best Poster, 10th International Symposium on Photonic and Electromagnetic Crystal Structures, Santa Fe, USA, 6th June 2012
Best Paper, Group 4 Photonics, London, UK, 15th September 2011
Best Poster, 9th International Symposium on Photonic and Electromagnetic Crystal Structures, Santa Fe, USA, 28th September 2010
Graduate Fellowship, Harvard University, 2007-2009
Graduate Scholarship, Texas A&M University, 2005
Best Outgoing Student of Electrical Engg., Govt. College of Engg., Univ. of Pune, India, 2004
Kishore Vaigyanik Protsahan Yojana Fellowship (Young Scientist Fellowship), Government of India, 2001- 2004. Only 4 engineering undergraduates were awarded the fellowship in 2001.

Teaching, Education and Outreach

[Winter 2017, Fall 2017, 2018, 2019] **University of Michigan:** EECS 334, Principles of Optics
[Fall 2017, Fall 2018, Fall 2019 2020] **University of Michigan:** EECS 438, Advanced Laser Lab
[Fall 2016, Fall 2017, Fall 2018, Fall 2019, Fall 2020] **University of Michigan:** EECS 434,
Principles of Photonics [Fall 2020] **University of Michigan:** EECS 598, Integrated
Nanophotonics (Fall 2020)

Teaching Assistant

[Fall 2009] **Harvard University:** ES 159/259, undergraduate/graduate course on Introduction to Robotics.

[Fall 2005, Fall 2006] **Texas A&M University:** ELEN 325, undergraduate course on Electronics.

[Spring 2007] **Texas A&M University:** ELEN 472/688, undergraduate/graduate course on Microelectronics
Circuit Fabrication.

Student Mentoring

10 graduate students (University of Michigan); 9 graduate (Harvard; MIT)

10 Undergraduate students

1 High school student

Public outreach

Michigan Research Community Discussions. Workshops and public talks on observational astronomy and
amateur radio.

Professional Activities

Review Panel for AFOSR, ARO, Israel Science Foundation

Session Chair for IEEE Research and Applications of Photonics in Defense Conference, 2018, 2019, 2020

Nano Subcommittee Chair for IEEE Photonics Conference, 2020

Nano Subcommittee for IEEE Photonics Conference, 2019

Referee for Advanced Functional Materials (Wiley), Advanced Materials (Wiley), Angewandte Chemie(Wiley),
Applied Materials & Interfaces (ACS), Applied Optics (OSA), Applied Physics B: Lasers and Optics (Springer),
Applied Physics Letters (AIP), AIP Advances, Electronic Letters (IET), IEEE Journal of Selected Topics in
Quantum Electronics, IEEE Journal of Quantum Electronics, IEEE Photonics, Journal of Applied Physics (AIP),
Journal of Physical Chemistry (ACS), Nature Photonics (Springer), Nature Communications (Springer), Optica
(OSA), Optics Express (OSA), Optical Engineering (SPIE), Optics Letters (OSA), Photonics Technology Letters
(IEEE), Science Advances(AAAS), Scientific Reports (Springer)

Senior Member of the Optical Society of America (OSA)

Member of the American Chemical Society (ACS), IEEE Photonics Society, International Society of Optics and
Photonics (SPIE), Material Research Society (MRS), American Physical Society (APS)

Council Member, Lurie Nanofabrication Facility, University of Michigan, Ann Arbor

Academic Advisory Board, Department of Electrical Engineering, College of Engineering Pune

Patents

U.S. Provisional Application 63/077,291, "Self-Erasable and Rewriteable Optoexcitonic Platform for Anti-
Tamper Hardware", Cheng C, Yang D., Kim J., Deotare P. B.

U.S. Provisional Application 63/060,393, "Passivation of 2D Transition Metal Dichalcogenides via Doped
Organic/Transition Metal Oxide", Zidong, Li, Xiao Liu, Xiaheng Huang, Steven R. Forrest, Parag B. Deotare

U.S. Provisional Application 62/913,771, "Non-destructive imaging of integrated circuits for counterfeit
detection", Deotare P. B., Li Z.

US patent 9991076, "Tunneling nanoelectromechanical switches", Bulović V., Lang J. H., Swager T., Niroui
F., Wang A. I., Andrew T. L., Deotare P., Sletten E., Murarka A. and D'Asaro M.

US patent application 61/539,414 (2011) "System and method for tuning coupled photonic crystal nanobeam
cavities", Lončar M., Deotare P. B., Frank I. and Quan Q.

US patent 9347829B2 "Integrated nanobeam cavity array spectrometer", Lončar M., Quan Q. and Deotare
P. B.

Book Chapter

Deotare P. B. and Lončar M., "Photonic crystal nanobeam cavities", *Encyclopedia of Nanotechnology*, edited by
G.L. Piazza, Springer-Verlag

Journal Publications (Under review)

- J 37 Khan K., Datta K., Sun K., Biswas M., Deotare P. B, Ahmadi E., "Investigation of 1 μ m-thick InGaN films grown on O-face ZnO by plasma-assisted molecular beam epitaxy", *under review*
- J 36 Huang X.*, Li Z.*, Liu X., Hou J., Kim J., Forrest S., Deotare P. B., "Neutralizing Defect States in MoS₂ Monolayers", *under review*
- J 35 Sung S. H., Schnitzer N., Novakov S., Baggari I., Luo X., Gim J., Vu N., Li Z., Brintlinger T., Sun Y., Deotare P. B., Sun K., Zhao L., Kourkoutis L. F., Heron J. T. and Hovden R., "Two-dimensional electronic order stabilized in clean polytype heterostructures", *under review*
- J 34 Jones D.*, Cheng C.*, Li Z., Zhang X., Kertesz M., Deotare P. B., Gavvalapalli N., "Waveguiding properties of perylene microcrystals synthesized by retarding the growth along pi-stack direction", *under review*

Journal Publications (accepted/published)

- J 33 Li Z., Lu X., Cordovilla D. F., Hou J., Lu Y., Kaczmarek A., Lyu Z., Taniguchi T., Watanabe K., Zhao L., Yang L., Deotare P. B., "Interlayer Exciton Transport in MoSe₂/WSe₂ Heterostructures", *ACS Nano*, 2021
- J 32 Datta K, Deotare P. B., "Strain Sensitivity of Dielectric Polarization to Doping in a Host:Guest Medium", *Optics Materials Express*, 10, 12, 3021-3029, 2020
- J 31 Cheng C, Yang D. S., Kim J., Deotare P. B., "Self-erasable and Rewritable Optoexcitonic Platform for Anti-tamper Hardware", *Advanced Optical Materials*, 2001287, 2020
- J 30 Cheng C, Cordovilla D., Li Z., Litvak E., Deotare P. B., "Energy Transport of Hybrid Charge Transfer Excitons", *ACS Nano*, 14, 8, 10462-10470, 2020
- J 29 Datta K, Deotare P. B., "Optical Determination of Young's Modulus of Nanoscale Organic Semiconductor Thin Films for Flexible Devices", *ACS Appl. Nano Mater.* 3, 2, 992-1001, 2019
- J 28 Cordovilla D. F.*, Li Z.*, Jang S. W., Deotare P. B., "Hot Exciton Transport in WSe₂ Monolayers", *Phys. Rev. B*, 100, 241401(R), 2019
- J 27 Cordovilla D. F., Li Z., Jang S. W., Cheng C., Deotare P. B., "Exciton Transport in Strained Monolayer WSe₂", *Appl. Phys. Lett.*, 113, no. 25 (2018): 252101
- J 26 Cheng C., Li Z., Hambarde A, Deotare P. B., "Efficient Energy Transfer across Organic-2D Inorganic Heterointerfaces", *ACS Appl. Mater. Interfaces*, 10 (45), 2018, pp 39336–39342
- J 25 Zhu W., Xu T., Wang H., Zhang C., Deotare P. B., Agrawal A. and Lezec H. J., "Surface-Plasmon-Polariton Laser based on an Open-Cavity Fabry-Perot Resonator", *Science Advances*, 3, 10, 2017.
- J 24 Deotare P. B., Chang W., Hontz E., Congreve D., L. Shi, Reuswig P., Modtland B., Bahlke M. E., Lee C. K., Willard A. P., Bulović V., Voorhis T. V, Baldo M. A., "Nanoscale Transport of Charge Transfer States in Organic Donor-Acceptor Blends", *Nature Materials*, 14, 11, 11130, 2015
- J 23 Mukherjee K., Deotare P. B., and Fitzgerald E., "Improved Photoluminescence Characteristics of Order-Disorder AlGaInP Quantum Wells at Room and Elevated Temperatures", *Appl. Phys. Lett.*, 106, 142109, 2015
- J 22 Ramos D., Frank I. W., Deotare P. B., Bulu I. and Lončar M., "Non-linear Mixing in Coupled Photonic Crystal Nanobeam Cavities due to Cross-coupling Opto-mechanical Mechanisms", *Appl. Phys. Lett.*, 105, 181121, 2014
- J 21 Deotare P. B.*, Mahony T.* (* **equal contribution**), Bulović V., "Ultra-Compact Low Threshold Organic Laser", *ACS Nano*, 8, 11, 11080, 2014
- J 20 Akselrod G. M., Deotare P. B., Thompson N. J., Lee J, Tisdale W. A., Baldo M. A., Menon V. M., Bulović V., "Visualization of Exciton Transport in Ordered and Disordered Molecular Solids", *Nat. Commun.*, 5, 3646, 2014
- J 19 Hausmann B. J. M.*, Bulu I.*, Venkataraman V.* (* **equal contribution**), Deotare P. B., Lončar M., "Diamond nonlinear photonics", *Nat. Photon.*, vol.8, pp 369, 2014
- J 18 Quan Q., Floyd D., Burgess I, Deotare P.B., Frank I. W., Tang S.K. Y., Ilic R., and Lončar M., "Single Particle Detection in CMOS Compatible Photonic Crystal Nanobeam Cavities", *Optics Exp.*, 21, 32225, 2013

- J 17 Deotare P.B., Kogos L. C., Bulu I. and Lončar M., "Photonic Crystal Nanobeam Cavities for Tunable Filter and Router Applications", **Invited**, *Selected Topics in Quantum Electronics, IEEE Journal of*, 19, pp 3600210, 2013
- J 16 *Hausmann B.J.M., *Bulu I.B., *Deotare P.B. (*** equal contribution**), McCutcheon M., Markham M.L., Twitchen D.J. and Lončar M., "Integrated High Quality Factor Optical Resonators in Diamond", *Nano Lett.*, 13, pp 1898, 2013
- J 15 Woolf D., Hui P. C., Iwase E., Khan M., Rodriguez A., Deotare P. B., Bulu I., Johnson S. G, Capasso F., and Lončar M., "Optomechanical and Photothermal Interactions in Suspended Photonic Crystal Membranes", *Optics Exp.*, 21, pp 7258, 2013
- J 14 Bradley J., Evans C., Choy J., Reshef O., Deotare P. B, Parsy F., Phillips K. C., Lončar M. and Mazur E., "Submicrometer-wide Amorphous and Polycrystalline Anatase TiO₂ Waveguides for Microphotonic Devices", *Optics Exp.*, 20, pp 23821, 2012
- J 13 Deotare P.B., Bulu I., Frank I. W., Quan Q., Zhang Y., Ilic R., Lončar M., "All Optical Reconfiguration of Optomechanical Filters", *Nat. Commun.* 3, pp 846, 2012
- J 12 Choy J. T., Bradley J. D. B., Deotare P.B., Burgess I. B., Evans C. C., Mazur E., Lončar M., "Integrated TiO₂ Resonators for Visible Photonics", *Optics Lett.*, 37, pp 539, 2012
- J 11 McCutcheon M.W., Deotare P.B., Zhang Y. and Lončar M., "High-Q Transverse-electric /Transverse-Magnetic Photonic Crystal Nanobeam Cavities", *Appl. Phys. Lett.*, 98, pp 111117, 2011
- J 10 Khan M., Babinec T., McCutcheon M. W., Deotare P. B. and Lončar M., "Fabrication and Characterization of Silicon Nitride Nanobeam Cavities", *Optics Lett.*, 36, pp 421, 2011
- J 9 Zhang Y., Khan M., Huang Y., Ryou J., Deotare P., Dupuis R. and Lončar M., "Photonic Crystal Nanobeam Laser", *Appl. Phys. Lett.*, 97, pp 051104, 2010
- J 8 Quan Q., Deotare P. B. and Lončar M., "Photonic Crystal Nanobeam Cavity Strongly Coupled to the Feeding Waveguide", *Appl. Phys. Lett.*, 96, pp 203102, 2010. ***Cover Page & selected for the May 31, 2010 issue of the Virtual Journal of Nanoscale Science and Technology.**
- J 7 *Frank I. W., *Deotare P. B. (*** equal contribution**), McCutcheon M. W. and Lončar M., "Programmable Photonic Crystal Nanobeam Cavities", *Optics Exp.*, 18, pp 8705, 2010.
- J 6 Lipomi D., Ilievski F., Wiley B., Deotare P. B., Lončar M. and Whitesides G., "Integrated Fabrication and Magnetic Positioning of Metallic and Polymeric Nanowires Embedded in Thin Epoxy Slabs", *ACS Nano*, 3, pp 3315, 2009
- J 5 Deotare P. B., McCutcheon M. W., Frank I. W., Khan M., and Lončar M., "Coupled Photonic Crystal Nanobeam Cavities", *Appl. Phys. Lett.*, 95, pp 031102, 2009
- J 4 Deotare P. B., McCutcheon M. W., Frank I. W., Khan M., and Lončar M., "High Quality Factor Photonic Crystal Nanobeam Cavities", *Appl. Phys. Lett.*, 94, pp 121106, 2009. **Selected for the April 13, 2009 issue of the Virtual Journal of Nanoscale Science and Technology.**
- J 3 Deotare P. B. and Kameoka J., "Sorting of Silica Nanocups by Diameter during Fabrication Process", *J. Nanomaterials*, pp 71259, 2007
- J 2 Deotare P. B. and Kameoka J., "Fabrication of Poly Lactic Acid (PLA) nano/micro Particles and Rods using Electrospraying", *Intl. J. of Electrospun Nanofibers and Application*, 1, 1, pp 123-130, 2007
- J 1 Deotare P. B. and Kameoka J., "Fabrication of Silica Nanocomposite-cups using Electrospraying", *Nanotechnology*, 17, pp 1380, 2006. ***Cover Page**

Invited Conference Talks

- I 5 Deotare P. B., "Hot Exciton Transport in Transition Metal Dichalcogenides", Fundamental Optical Processes in Semiconductors, Banff, Canada, 2019
- I 4 Deotare P. B., "Controlling Excitonic Energy Transport in Nanoscale Systems", Facets of Photonics, Pune, India, 2018
- I 3 Deotare P. B., "Hybrid Organic-2D Material Interfaces for Optoelectronic Devices", Novel Optical Materials and Applications, New Orleans, 2017
- I 2 Deotare P.B., Mahony T. S. and Bulović V., "Organic Lasers for Biochemical Sensing", 35th Progress in Electromagnetics Research Symposium (PIERS), Guangzhou, China, Aug 2014

- I 1 Deotare P.B. and Lončar M., "Photonic Crystal Nanobeam Cavities for Reconfigurable Nanophotonics and Cavity QED", Asia Communications and Photonics Conference and Exhibition, Shanghai, China, Nov, 2009

Contributed Conference Presentations (selected)

- C 48 Khan K., Datta K., Sun K., Biswas M., Deotare P. B., Ahmadi E., "Investigation of 1 μ m-thick InGaN films grown on O-face ZnO by plasma-assisted molecular beam epitaxy", EMC 2021
- C 47 Datta K., Li Z., Lyu Z., Taniguchi T., Watanabe K., Deotare P. B., "Acoustic Transport of Room Temperature Excitons in Monolayer WSe₂", MRS 2021
- C 46 Cheng C., Datta K., Yang D. S., Kim J., Deotare P. B., "Tuning Field-Effect Mobility of Ultrasensitive Hybrid Transistors with UV Light", MRS 2021
- C 45 Datta K., Li Z., Lyu Z., Taniguchi T., Watanabe K., Deotare P. B., "Room Temperature Exciton Modulation by Surface Acoustic Wave in Monolayer WSe₂", APS 2021
- C 44 Huang X., Li Z., Liu X., Hou J., Kim J., Forrest S., Deotare P. B., "Elimination of Defect States in 2D Transition Metal Dichalcogenides via Doped Organic/Transition Metal Oxide Mixtures", MRS 2020
- C 43 Cheng C., Yang D., Kim J., Deotare P. B., "Self-erasable and rewritable photonic platform for anti-tamper hardware", 2020 IEEE Photonics Conference (selected for best student paper contest)
- C 42 Li Z., Cordovilla D. F., Hou J., Lu Y., Deotare P. B., "Effect of Moiré Potentials in MoSe₂/WSe₂ Heterostructures on Exciton Transport", CLEO 2020
- C 41 Datta K., Huang X., Deotare P. B., "Characterizing Mechanical Properties of Organic Thin Films for Directed Energy Transport", MRS Fall 2019
- C 40 Cheng C., Li Z., Deotare P. B., "Energy Transport at Hybrid Organic-MoS₂ Interface", CLEO 2019
- C 39 Li Z., Cordovilla D., Jang S. W., and Deotare P. B. "Excitation Density-Dependent Exciton Transport in a h-BN Encapsulated WSe₂ Monolayer", APS 2019
- C 38 Cordovilla D. F., Li Z., Deotare P. B., "Exciton Transport in Strained Monolayer WSe₂", MRS Fall 2018
- C 37 Cheng C., Li Z., Deotare P. B., "Highly Efficient Energy Transfer Between TMDCs and Organic Materials", CLEO 2018
- C 36 Li Z., Cheng C., Deotare P. B., "Exciton Transport in MoS₂/WSe₂ Heterostructure", MRS Spring 2018
- C 35 Cheng C., Wang H., Deotare P. B., "Highly sensitive photodetectors based on organic-inorganic heterostructure. ", 2017 IEEE Photonic Conference, Orlando, FL, USA, 2017, pp. 487-488.
- C 34 Zhu W., Zhang C., Xu T., Wang H., Deotare P. B., Agrawal A. and Lezec H. J., "Surface-Plasmon-Polariton Laser Based on a Metallic Trench Fabry-Perot Resonator", MRS Fall 2017
- C 33 Deotare P. B., Hontz E., Congreve D., Chang W., Reuswig P., Bulović V., Voorhis T. V. and Baldo M. "Nanoscale transport of charge transfer states in organic donor-acceptor blends", MRS Spring 2015
- C 32 Deotare P. B., Niroui F., Modtland B., Churchill H., Ling X., Jarillo-Herrero P., Dresselhaus M., Kong J., Baldo M. and Bulović V., "Transient Mapping of Exciton Dynamics in MoS₂ and WSe₂ Monolayers", MRS Fall 2014
- C 31 Niroui F., Deotare P. B., Sletten E. M., Wang A. I., Yablonovitch E., Swager T. M., Lang J. H. and Bulović V., "Nanoelectromechanical tunneling switches based on self-assembled molecular layers", MEMS 2014
- C 30 Deotare P. B., Akselrod G. and Bulović V., "Patterning J-aggregate thin films for controlled exciton dynamics", MRS Fall 2013
- C 29 Akselrod G. M., Deotare P. B., Thompson N. J., Lee J, Tisdale W. A., Baldo M. A., Menon V. M., Bulović V., "Visualization of exciton diffusion in space, time, and energy", N7.04, MRS Fall 2013
- C 28 Hausmann B., Venkataraman V., Bulu I., Deotare P. B., Lončar M., "An on-chip diamond optical parametric oscillator", S8.01, MRS Fall 2013
- C 27 Kita S., Ramos D., Frank I., Deotare P. B., Burek M., Wang C., Lončar M., "Nanobeam transducers based on photonic crystal nanocavities toward ultrahigh sensitive mass spectrometry", UU6.08, MRS Fall 2013
- C 26 Niroui F., Wang A., Sletten E., Deotare P.B., Swager T., Lang J. H., Bulović V., "Tunneling nano-electromechanical switches using organic thin films." LASERION (2013)

- C 25 Deotare P.B., Bulu I., Quan Q., Elic R. and Lončar M, "Improving optomechanical contributions in silicon photonic devices", PECS-X, Santa Fe, USA, June 2012 **(best poster award)**
- C 24 Ramos D, Deotare P.B., Bulu I., and Lončar M, "Thermo-optic and optomechanical mixing in photonic devices", PECS-X Santa Fe, USA, June 2012
- C 23 Hausmann B., Deotare P. B.*, Bulu I., and Lončar M, "Diamond photonic devices for non-linear optics" CLEO (CW1A), San Jose, May 2012
- C 22 Deotare P. B., Kogos L., Quan Q., Ilic R., and Lončar M, "On-chip integrated spectrometer using nanobeam photonic crystal cavities" CLEO (CM3B), May 2012
- C 21 Deotare P.B., Frank I.W., Bulu I., Zhang Y., Quan Q., Elic R. and Lončar M, "All optical control of optomechanical filters", CLEO (JW4A), San Jose, May 2012 (poster)
- C 20 Evans C. C., Bradley J. D. B., Choy J. T., Reshef O., Deotare P. B., Lončar M., and Mazur E., "Submicrometer-width TiO₂ waveguides", CLEO (CM3M), San Jose, May 2012
- C 19 Hui P., Woolf D., Iwase E., Bulu I., Rodriguez A., Khan M., Deotare P. B., Johnson S., Capasso F., and Lončar M., "Dynamics of a tethered silicon photonic crystal membrane due to optical gradient, photothermal and Casimir forces", CLEO (QW3E), San Jose, May 2012
- C 18 Deotare P. B, Bulu I., Ilic R. and Lončar M, "Optical gradient force based reconfiguration of photonic devices", Gordon Research Conference, Galveston, TX USA, March 4-9, 2012 (poster)
- C 17 Bradley J., Evans C., Choy J., Reshef O., Deotare P. B., Lončar M. and Mazur E., "TiO₂ nanophotonic waveguides for on-chip nonlinear optical devices", SPIE Opto, San Francisco, 2012
- C 16 Deotare P.B., Frank I.W., Bulu I., Zhang Y., Quan Q., Elic R. and Lončar M, "All-optical control of optomechanical properties of photonic crystal nano-beam filter", Group IV, London, September 2011 **(best paper award)**
- C 15 Deotare P.B., Quan Q., and Lončar L., "Micro-spectrometer for real-time diagnostics and quality control", TechConnect, Boston June 2011 (poster)
- C 14 Deotare P.B., Zhang Y., Frank I.W., Quan Q., Elic R. and Lončar M., "Optically reconfigurable photonic crystal filter and modulator", Photonic West (7946-38), San Francisco USA, 2011
- C 13 Degirmenci F., Bulu I., Deotare P.B., Khan M., Lončar M. and Capasso F., "Waveguide integrated plasmonic platform for sensing and spectroscopy", Photonic West (7941-44), San Francisco USA, 2011
- C 12 Deotare P. B., Zhang Y., Frank I.W., Quan Q., McCutcheon M. W. and Lončar M., "Integrated all-optical reconfigurable photonic crystal nanobeam Filters", PECS-IX, Granada, Spain, 28 Sept. 2010 **(best poster award)**
- C 11 Quan Q., Deotare P.B. and Lončar M., "Deterministic design of ultrahigh Q and small mode volume photonic crystal nanobeam cavity", CLEO, San Francisco, USA, May 19, 2010
- C 10 Zhang Y., Khan M., Huang Y., Ryou J. H., Deotare P.B., Dupuis R., Lončar M.; "Photonic crystal nanobeam lasers", CLEO, San Francisco, USA, May 19, 2010
- C 9 Frank I.W., Deotare P.B., McCutcheon M.W., Khan M. and Lončar M., "Dynamically reconfigurable nanobeam photonic crystal cavities", SPIE Photonics West (7609-10), San Francisco, Jan 26, 2010
- C 8 Khan M., Babinec T., McCutcheon M.W., Deotare P.B. and Lončar M., "1D Si₃N₄ nanobeam cavities", SPIE Photonics West (7609-07), San Francisco CA, Jan 26, 2010
- C 7 Deotare P. B., McCutcheon M. W., Frank I. W., Khan M., Shankar R. and Lončar M., "High quality factor 1D photonic crystal cavities in silicon", CLEO, Baltimore, USA, June 5, 2009
- C 6 Brendan S., Akimov A., Koppens F., Yu C., Deotare P. B., Chang D., Hemmer P., Zibrov A., Lončar M., Park H., Lukin M., "Quantum optics with integrated plasmonic/optical systems", 40th Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Charlottesville, Virginia, May 19-23, 2009
- C 5 Deotare P. B., McCutcheon M. W., Frank I. W., Khan M. and Lončar M., "Coupled high quality factor 1D photonic crystal cavities", PECS-VIII, Sydney, Australia, April 6, 2009
- C 4 McCutcheon M. W., Chang D. E., Zhang Y., Deotare P. B., Khan M., Lukin M. D. and Lončar M., "Ultra-high Q/V double mode photonic crystal nanocavity for nonlinear frequency conversion", PECS-VIII, Sydney, Australia, 2009

- C 3 Zhang Y., McCutcheon M. W., Deotare P. B., Khan M. and Lončar M., "High quality factor photonic crystal nanocavities in impossible scenarios", PECS-VIII, Sydney, Australia, 53, April 6, 2009
- C 2 Deotare P. B., Khan M. and Lončar M., "Vapor phase release of silicon nanostructures for optomechanics application", SPIE Photonics West (7205-09), San Jose, CA, January 27, 2009
- C 1 Khan M., McCutcheon M. W., Deotare P. B., and Lončar M., "Design, fabrication, and characterization of Si₃N₄ photonic crystal nanocavities for diamond-based quantum information processing applications", MRS Fall Meeting, Vol.1108-1152E, Boston, MA, December 2008

Seminars

- Penn State University, 2021
- University of Wisconsin, 2020
- College of Engineering, Pune, 2019
- Michigan Research Community's winter seminar, 2018
- Michigan Research Community's winter seminar, 2017
- Applied Physics Seminar, University of Michigan, Ann Arbor, 2016
- Stonybrook University, April 2015
- University of Illinois, Urbana Champaign, April 2015
- CREOL, April 2015
- Princeton University, March 2015
- University of Michigan, Ann Arbor, March 2015
- Harvard University, March 2015
- Penn State University, Feb. 2015
- Rice University, 2012
- MIT, 2012
- "Liquid Mirror Telescope", Sky Watchers Association, Pune, India, 2002
- "Hyper-sensitization in Astrophotography", Sky Watchers Asso., Pune, 2001
- "Observational Amateur Astronomy", Shirur, India, 2000