



Dr Krishna Coimbatore Balram
PhD.(Stanford), MSc(Stanford)

Associate Professor in Photonic Quantum Engineering

Area of research

Nanoscale Opto-electro-mechanical devices for information processing and sensing

Office 4.15 MVB
Merchant Venturers Building,
Woodland Road, Clifton BS8 1UB
([See a map](#))

+44 (0) 117 331 5378 ext 15378
krishna.coimbatorebalram@bristol.ac.uk

Summary

Biography

I grew up in Delhi, India's historic capital city and partly because of that, I have a lifelong affection for history and all things ancient. I got my undergraduate degree in India, graduate degrees in the US and started as a lecturer at Bristol in January 2017. My research interests are primarily in the field of nanoscale opto-electro-mechanical devices for information processing and sensing applications. I am particularly interested in nanoscale device fabrication and aim to produce state of the art opto-electronic devices at the Bristol nano-fabrication facility.

Keywords

- Silicon photonics
- Integrated quantum photonics
- Optomechanics
- Optical MEMS
- Plasmonics

Memberships

Organisations

[Department of Electrical & Electronic Engineering](#)

Other sites

- [Eeng](#)

Research Groups

- [Photonics - Core](#)

Links

-  [Personal Webpage](#)

-  [Google Scholar: Krishna C. Balram](#)

Recent publications

- Delsing, P, Cleland, AN, Schuetz, MJ, Knörzer, J, Giedke, G, Cirac, JI, Srinivasan, K, Wu, M, Balram, KC, Bäuerle, C, Meunier, T, Ford, CJ, Santos, PV, Cerda-Méndez, E, Wang, H, Krenner, HJ, Nysten, ED, Weiß, M, Nash, GR, Thevenard, L, Gourdon, C, Rovillain, P, Marangolo, M, Duquesne, JY, Fischerauer, G, Ruile, W, Reiner, A, Paschke, B, Denysenko, D, Volkmer, D, Wixforth, A, Bruus, H, Wiklund, M, Reboud, J, Cooper, JM, Fu, YQ, Brugger, MS, Rehfeldt, F & Westerhausen, C, 2019, '[The 2019 surface acoustic waves roadmap](#)'. *Journal of Physics D: Applied Physics*, vol 52.
- Valle, S & Balram, KC, 2019, '[High-frequency, resonant acousto-optic modulators fabricated in a MEMS foundry platform](#)'. *Optics Letters*, vol 44., pp. 3777-3780
- Jia, S, Le Boulbar, ED, Balram, KC, Pugh, JR, Wang, T, Allsopp, DW, Shields, PA & Cryan, MJ, 2019, '[A Waveguide Integrated GaN Distributed Bragg Reflector Cavity Using Low Cost Nanolithography](#)'. *Nano-Micro Letters*.
- Ramp, H, Hauer, BD, Balram, KC, Clark, TJ, Srinivasan, K & Davis, JP, 2019, '[Elimination of Thermomechanical Noise in Piezoelectric Optomechanical Crystals](#)'. *Physical Review Letters*, vol 123.
- Du, B, Tang, C, Zhao, D, Zhang, H, Yu, D, Yu, M, Balram, KC, Gersen, H, Yang, B, Cao, W, Gu, C, Besenbacher, F, Li, J & Sun, Y, 2019, '[Diameter-optimized high-order waveguide nanorods for fluorescence enhancement applied in ultrasensitive bioassays](#)'. *Nanoscale.*, pp. 14322-14329
- Grutter, K, Davanco, M, Balram, KC & Srinivasan, K, 2018, '[Tuning and stabilization of optomechanical crystal cavities through NEMS integration](#)'. *APL Photonics*, vol 3.
- Daveau, RS, Balram, KC, Pregolato, T, Liu, J, Lee, EH, Song, JD, Verma, V, Mirin, R, Nam, SW, Midolo, L, Stobbe, S, Srinivasan, K & Lodahl, P, 2017, '[Efficient fiber-coupled single-photon source based on quantum dots in a photonic-crystal waveguide](#)'. *Optica*, vol 4., pp. 178-184
- Balram, KC, Davanço, MI, Ilic, BR, Kyhm, J-H, Song, J & Srinivasan, K, 2017, '[Acousto-Optic Modulation and Optoacoustic Gating in Piezo-Optomechanical Circuits](#)'. *Physical Review Applied*, vol 7.
- Balram, KC, Westly, DA, Davanço, M, Grutter, KE, Li, Q, Michels, T, Ray, CH, Yu, L, Kasica, RJ, Wallin, CB, Gilbert, IJ, Bryce, BA, Simelgor, G, Topolancik, J, Lobontiu, N, Liu, Y, Neuzil, P, Svatos, V, Dill, KA, Bertrand, NA, Metzler, MG, Lopez, G, Czapski, DA, Ocola, L, Srinivasan, KA, Stavis, SM, Aksyuk, VA, Liddle, JA, Krylov, S & Ilic, BR, 2016, '[The Nanolithography Toolbox](#)'. *Journal of Research of the National Institute of Standards and Technology*, vol 121., pp. 464-475
- Balram, KC, Davanco, M, Song, J & Srinivasan, K, 2016, '[Coherent coupling between radiofrequency, optical and acoustic waves in piezo-optomechanical circuits](#)'. *Nature Photonics*, vol 10., pp. 346-352

[View complete publications list](#) in the University of Bristol publications system

Courses

Dr Coimbatore Balram currently teaches 1 courses: