

## SELECTED PUBLICATIONS AS OF MARCH 2022

RUKMINI DEY

### Arxived:

- (1) R. Dey, “ Quillen-type Bundle and Geometric Prequantization on Moduli Space of Seiberg-Witten Equations on Product of Riemann surfaces” – arXiv: 2203.15997
- (2) R. Dey, P. Kumar, R. K. Singh, “Interpolation by Maximal and Minimal surfaces” – arXiv: 2102.03019 (to be updated)
- (3) R. Dey, K. Ghosh, S. Soundararajan, “ Finite Decomposition of Minimal surfaces, Maximal surfaces, Time-like Minimal surfaces and Born-Infeld solitons” – arXiv:2010.04405

### Published/Accepted:

- (1) R. Dey, K. Ghosh, “Pull back coherent states and squeezed states and quantization” to appear in Symmetry, Integrability and Geometry: Methods and Applications (SIGMA), (2022) – arxiv: 2108.08082
- (2) R. Dey, J. Samuel, R. S. Vidyarthi, “Coadjoint orbits and Kähler structure: examples from coherent states” , to appear in Reports in Mathematical Physics, (2022)– arXiv 2105.14283
- (3) R. Dey, R. Sarma, R. K. Singh, On Euler-Ramanujan formula, Dirichlet-series and minimal surfaces, Proc Indian Math Sci 130, 61 (2020); arxiv:1812.01453
- (4) R. Dey, P. Kumar, R. K. Singh, Existence of Maximal surface containing given curve and special singularity, J. of Ramanujan Math Soc., 33, no. 4, 455-471, 2018; arxiv: 1612.06757
- (5) R. Dey, V. Thakre, Generalized Seiberg-Witten equations on Riemann surface, Jour. Geom. Symm. Phys. vol 45, 47-66, 2017; arxiv: 1502.01486
- (6) R. Dey, S. Ganguli, Geometric Quantization of finite Toda systems and coherent states, Jour. Geom. Symm. Phys. vol 44,21-38, 2017; arxiv: 1612.02987.
- (7) R. Dey, S. Ganguli The dimension of the Hilbert space of geometric quantization of vortices on a Riemann surface, Int. J. Geom. Methods Mod. Phys., vol 14, no. 10, 1750144., 2017, arxiv: 1606.03810
- (8) R. Dey, Geometric Quantization of the Hitchin System, Int. J. Geom. Methods Mod. Phys., 14, no. 4, 1750064 (2017) ; arxiv: 1604.01650
- (9) R. Dey, R.K. Singh, Born-Infeld Solitons, maximal surfaces and Ramanujan’s identities, Archiv der Mathematik 108(5), 527-538, (2017); arxiv: 1702.06310
- (10) R. Dey, ”Ramanujan’s identities, minimal surfaces and solitons”, Proc. Indian Acad. Sci, 126(3), 421-431, (2016); arxiv 1508.05183
- (11) I. Biswas, S. Chatterjee, R. Dey, ”Geometric prequantization on the path space of a prequantized manifold”, IJGMMP, Volume No.12, Issue No. 3, pp 1550030, (2015); arxiv 1411.5716

- (12) R. Dey, V. Mathai, "Holomorphic Quillen determinant bundle on integral compact Kähler manifolds", *Quart. J. Math.* 64 (2013), 785-794, Quillen Memorial Issue; arXiv:1202.5213v3
- (13) R. Dey, P. Kumar, "One parameter family of solitons from minimal surfaces" *Proc. Indian Acad. Sci.*, vol 123, no.1, pg. 55-65, 2013; arxiv:1204.5875
- (14) R. Dey, S. K. Paul, "Quillen bundle and Geometric Prequantization of Non-Abelian Vortices on a Riemann surface" *Proc. Indian Acad.Sci. (Math. Sci.)* Vol 121, No. 1, (2011), pp 27-35; arXiv:1012.4616
- (15) R. Dey, "Geometric prequantization of the modified Seiberg-Witten equations in 2-dimensions" *Adv. Theor. Math. Phys.* 13.5 (2009); arXiv:0802.2307
- (16) R. Dey, "HyperKähler prequantization of the Hitchin system and Chern-Simons gauge theory with complex gauge group", *Adv. Theor. Math. Phys.* 11 (2007) 819-837; math-phy/0605027
- (17) (a) R. Dey, "Geometric prequantization of the moduli space of the vortex equations on a Riemann surface" *Journal of Mathematical Physics*, vol. 47, issue 10, (2006), page 103501-103508; math-phy/0605025  
 (b) R. Dey "Erratum: Geometric prequantization of the moduli space of the vortex equations on a Riemann surface" *Journal of Mathematical Phys.* 50, 119901 (2009); a modified summary is given in arxiv: 1604.02142
- (18) R. Dey "Geometric quantization of the moduli space of the self-duality equations on a Riemann surface", *Reports on Mathematical Physics*, Vol. 57, no. 2, (2006) pg. 179-188. math-phy/0605026
- (19) R. Dey, "Quantization of a dimensionally reduced Seiberg-Witten moduli spaces" ; *Mathematical Physics Electronic Journal*, vol 10, (2004), paper no.9, <http://www.maia.ub.es/mpej>
- (20) R. Dey, "A complete conformal metric of preassigned negative Gaussian curvature for a punctured hyperbolic Riemann surfaces", *Proceedings of Indian Academy of Sciences – Math Sci.* Vol.114,No.2, (2004), pg. 141-151; math.AP/0406568.
- (21) R. Dey, "The Weierstrass-Enneper representation using hodographic coordinates on a minimal surfaces" *Proceedings of Indian Academy of Sciences – Math.Sci.* Vol.113, No.2, May (2003), pg 189-193; math.DG/0309340.
- (22) (a) R. Dey "Symplectic and Hyperkähler structures in dimensional reduction of the Seiberg-Witten equations with a Higgs field", *Reports on Mathematical Physics*, vol 50 issue 3 (2002); math.DG/0112219.  
 (b) R. Dey, "Addendum: Deformation quantization of a dimensionally reduced Seiberg-Witten moduli space"; *Reports on Mathematical Physics*, vol 55.3 (2005), pp. 447-450.
- (23) I. Biswas, R. Dey, "Quantization and contact structure on manifolds with projective structure", *Journal of Geometry and Physics*, vol 42/4, page 355-369 (2002).
- (24) (a) R. Dey "A variational proof for the existence of a conformal metric with preassigned negative Gaussian curvature for compact Riemann surfaces of genus  $> 1$ " *Proc.Indian.Academy of Sciences*, 111 (2001), page 407-414; arxiv: math/0112203

- (b) R. Dey "First erratum": Proceedings of Indian Academy of Sciences, 113, No. 3, (2003), page 353;
- (c) R. Dey "Second erratum" : Proceedings of Indian Academy of Sciences, 114, No. 2, (2004),page 215.  
R. Dey, "Fully corrected version": math.DG/0112203

I.C.T.S.-T.I.F.R., BANGALORE