

SELECTED PUBLICATIONS AS OF AUGUST 2021

RUKMINI DEY

Arxived:

- (1) R. Dey, K. Ghosh, "Pull back coherent states and squeezed states and quantization" – [arxiv: 2108.08082](#)
- (2) R. Dey, J. Samuel, R. S. Vidyarthi, "Coherent states as Kähler embeddings in CP^∞ " – [arXiv 2105.14283](#)
- (3) R. Dey, P. Kumar, R. K. Singh, "Interpolation by Maximal and Minimal surfaces" – [arXiv: 2102.03019](#)
- (4) 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:

- (1) 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](#)
- (2) 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](#)
- (3) R. Dey, V. Thakre, Generalized Seiberg-Witten equations on Riemann surface, Jour. Geom. Symm. Phys. vol 45, 47-66, 2017; [arxiv: 1502.01486](#)
- (4) 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](#)
- (5) 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](#)
- (6) R. Dey, Geometric Quantization of the Hitchin System, Int. J. Geom. Methods Mod. Phys., 14, no. 4, 1750064 (2017) ; [arxiv: 1604.01650](#)
- (7) R. Dey, R.K. Singh, Born-Infeld Solutions, maximal surfaces and Ramanujan's identities, Archiv der Mathematik 108(5), 527-538, (2017); [arxiv: 1702.06310](#)
- (8) R. Dey, "Ramanujan's identities, minimal surfaces and solitons", Proc. Indian Acad. Sci, 126(3), 421-431, (2016); [arxiv 1508.05183](#)
- (9) 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](#)
- (10) 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](#)

- (11) 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](#)
- (12) 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](#)
- (13) R. Dey, "Geometric prequantization of the modified Seiberg-Witten equations in 2-dimensions" Adv. Theor. Math. Phys. 13.5 (2009);
[arXiv:0802.2307](#)
- (14) 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-ph/0605027 [arXiv:math-ph/0605027](#)
- (15) (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-ph/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
[arXiv:math-ph/0605025](#)
- (16) 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-ph/0605026
[arXiv:math-ph/0605026](#)
- (17) 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>
- (18) 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. [arXiv:math/0406568](#)
- (19) 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.
[arXiv:math/0309340](#)
- (20) (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.
[arXiv:math/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.
- (21) 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).
- (22) (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
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