

• **Recent preprints:**

- [1] Dmitry Chelkak, Benoît Laslier, Marianna Russkikh, Bipartite dimer model: p-embeddings and Lorentz-minimal surfaces. [arXiv:2109.06272](#)
- [2] Dmitry Chelkak, Konstantin Izyurov, Rémy Mahfouf, Universality of spin correlations in the Ising model on isoradial graphs. [arXiv:2104.12858](#)
- [3] Dmitry Chelkak, Clément Hongler, Konstantin Izyurov, Correlations of primary fields in the critical planar Ising model. [arXiv:2103.10263](#)
- [4] Dmitry Chelkak, Ising model and s-embeddings of planar graphs. [arXiv:2006.14559](#)
- [5] Dmitry Chelkak, Sanjay Ramassamy, Fluctuations in the Aztec diamonds via a Lorentz-minimal surface. [arXiv:2002.07540](#)
- [6] Dmitry Chelkak, Benoît Laslier, Marianna Russkikh, Dimer model and holomorphic functions on t-embeddings of planar graphs. [arXiv:2001.11871](#)
- [7] Dmitry Chelkak, Clément Hongler, Rémy Mahfouf, Magnetization in the zig-zag layered Ising model and orthogonal polynomials. [arXiv:1904.09168](#)

• **Accepted/published:**

- [8] Mikhail Basok, Dmitry Chelkak, Tau-functions à la Dubédat and probabilities of cylindrical events for double-dimers and  $\text{CLE}(4)$ , *J. Eur. Math. Soc. (JEMS)*, 23 (2021), no. 8, 2787–2832.
- [9] Dmitry Chelkak, Yijun Wan, On the convergence of massive loop-erased random walks to massive SLE(2) curves. *Electron. J. Probab.*, 26 (2021), paper no. 54, 1–35.
- [10] Dmitry Chelkak, Planar Ising model at criticality: state-of-the-art and perspectives. In *Proceedings of the International Congress of Mathematicians 2018 (ICM 2018)*, Vol. 3, pages 2789–2816. World Scientific Publishing Company Inc., 2019
- [11] Dmitry Chelkak, 2D Ising model: correlation functions at criticality via Riemann-type boundary value problems. In *European Congress of Mathematics: Berlin, 18-22 July, 2016*, pages 235–256. European Mathematical Society, Zürich, 2018.
- [12] Dmitry Chelkak, David Cimasoni, Adrien Kassel, Revisiting the combinatorics of the 2D Ising model, *Ann. Inst. Henri Poincaré D* 4 (2017), no. 3, 309–385.
- [13] Dmitry Chelkak, Robust discrete complex analysis: a toolbox, *Ann. Probab.* 44 (2016), no. 1, 628–683.
- [14] Dmitry Chelkak, Hugo Duminil-Copin, Clément Hongler, Crossing probabilities in topological rectangles for the critical planar FK Ising model, *Electron. J. Probab.*, 21 (2016), paper no. 5, 1–28.
- [15] Dmitry Chelkak, Clément Hongler, Konstantin Izyurov, Conformal invariance of spin correlations in the planar Ising model, *Ann. Math.* 181 (2015), no. 3, 1087–1138.
- [16] Dmitry Chelkak, Hugo Duminil-Copin, Clément Hongler, Antti Kemppainen, Stanislav Smirnov, Convergence of Ising interfaces to Schramm’s SLE curves, *C. R. Acad. Sci. Paris, Ser. I* 352 (2014), 157–161.
- [17] Dmitry Chelkak, Konstantin Izyurov, Holomorphic spinor observables in the critical Ising model, *Comm. Math. Phys.* 322 (2013), no. 2, 303–332.

DMITRY CHELKAK – LIST OF PUBLICATIONS (CONTINUED)

- [18] Dmitry Chelkak, Stanislav Smirnov, Universality in the 2D Ising model and conformal invariance of fermionic observables, *Invent. Math.*, 189 (2012), no. 3, 515–580.
  - [19] Dmitry Chelkak, Stanislav Smirnov, Discrete complex analysis on isoradial graphs, *Advances in Mathematics*, 228 (2011), no. 3, 1590–1630.
  - [20] An application of the fixed point theorem to the inverse Sturm-Liouville problem. Chelkak, D.: *Записки научных семинаров ПОМИ*, 370 (2009), 203–218.  
English translation: *J. Math. Sci.* 166 (2010), no. 1, 118–126.
  - [21] Обратная задача Штурма-Лиувилля со смешанными краевыми условиями, Е. Л. Коротяев, Д. С. Челкак: *Алгебра и анализ*, 21 (2009), no. 5, 114–137.  
English translation: The inverse Sturm–Liouville problem with mixed boundary conditions. *St. Petersburg Math. J.* 21 (2010), no. 5, 761–778.
  - [22] Weyl-Titchmarsh functions of vector-valued Sturm–Liouville operators on the unit interval. Chelkak, D.; Korotyaev, E.: *Journal of Functional Analysis* 257 (2009), 1546–1588.
  - [23] The inverse problem for perturbed harmonic oscillator on the half-line with a Dirichlet boundary condition. Chelkak, D.; Korotyaev, E.: *Ann. Henri Poincaré* 8 (2007), no. 6, 1115–1150.
  - [24] Parametrization of the isospectral set for the vector-valued Sturm-Liouville problem. Chelkak, D.; Korotyaev, E.: *Journal of Functional Analysis* 241 (2006), 359–373.
  - [25] Spectral estimates for Schrodinger operator with periodic matrix potential on the real line. Chelkak, D.; Korotyaev, E.: *Int. Math. Res. Not.*, 2006, Article ID 60314, 1–41.
  - [26] Inverse problem for harmonic oscillator perturbed by potential, characterization. Chelkak, D.; Kargaev, P.; Korotyaev, E.: *Comm. Math. Phys.* 249 (2004), no. 1, 133–196.
  - [27] Inverse problem for harmonic oscillator perturbed by potential. Chelkak, D.; Kargaev, P.; Korotyaev, E.: Inverse problems and spectral theory, 93–102, *Cont. Math.* 348, AMS, Providence, RI, 2004.
  - [28] Асимптотика спектральных данных гармонического осциллятора, возмущенного потенциалом с конечной энергией. Д. С. Челкак: *Зап. Науч. Сем. ПОМИ* 303 (2003) 223–271. English translation: Asymptotics of spectral data of a harmonic oscillator perturbed by a potential. *J. Math. Sci.* 129 (2005), no. 4, 4053–4082.
  - [29] Аппроксимация в пространстве спектральных данных возмущенного гармонического осциллятора. Д. С. Челкак: *Проблемы Мат. Анализа* 26 (2003) 287–300.  
English translation: Approximation in the space of spectral data of a perturbed harmonic oscillator. *J. Math. Sci.* 117 (2003), no. 3, 4260–4269.
  - [30] An inverse problem for an harmonic oscillator perturbed by potential: uniqueness. Chelkak, D.; Kargaev, P.; Korotyaev, E.: *Lett. Math. Phys.* 64 (2003), no. 1, 7–21.
- **Unpublished preprints:**
- [31] Dmitry Chelkak, Alexander Glazman, Stanislav Smirnov, Discrete stress-energy tensor in the loop  $O(n)$  model. [arXiv:1604.06339](https://arxiv.org/abs/1604.06339)
  - [32] Inverse vector-valued Sturm-Liouville problem. I. Uniqueness theorem. Dmitry Chelkak, Sergey Matveenko, [arXiv:1312.3621](https://arxiv.org/abs/1312.3621).
  - [33] Inverse spectral analysis for finite matrix-valued Jacobi operators. J. Bruning, D. Chelkak, E. Korotyaev, [arXiv:math/0607809](https://arxiv.org/abs/math/0607809).