



The structure in the temperate region of the F -model with domain-wall boundaries

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joint work with

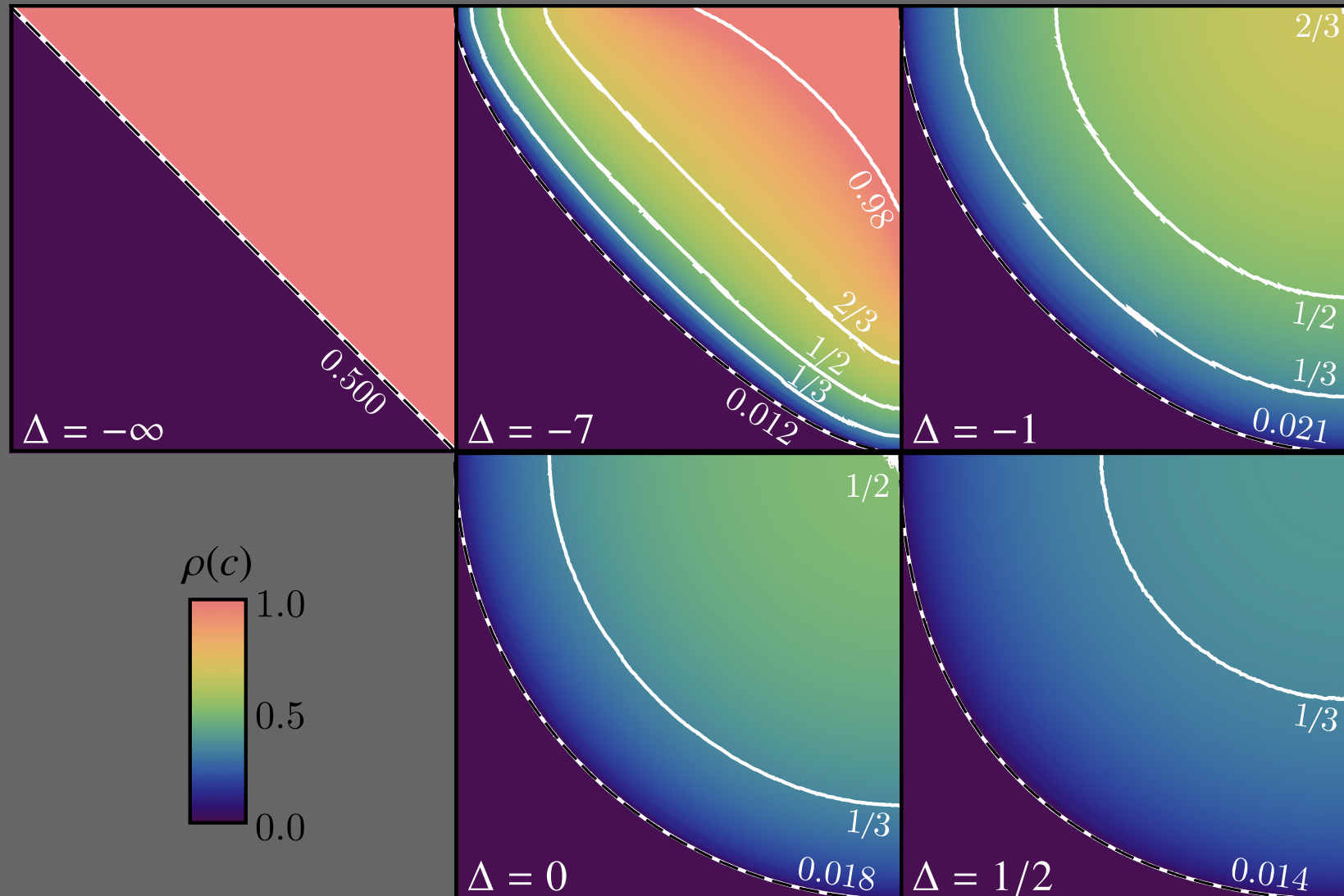
Rick Keesman

(Utrecht U, Leiden U)

arXiv:1702.05474

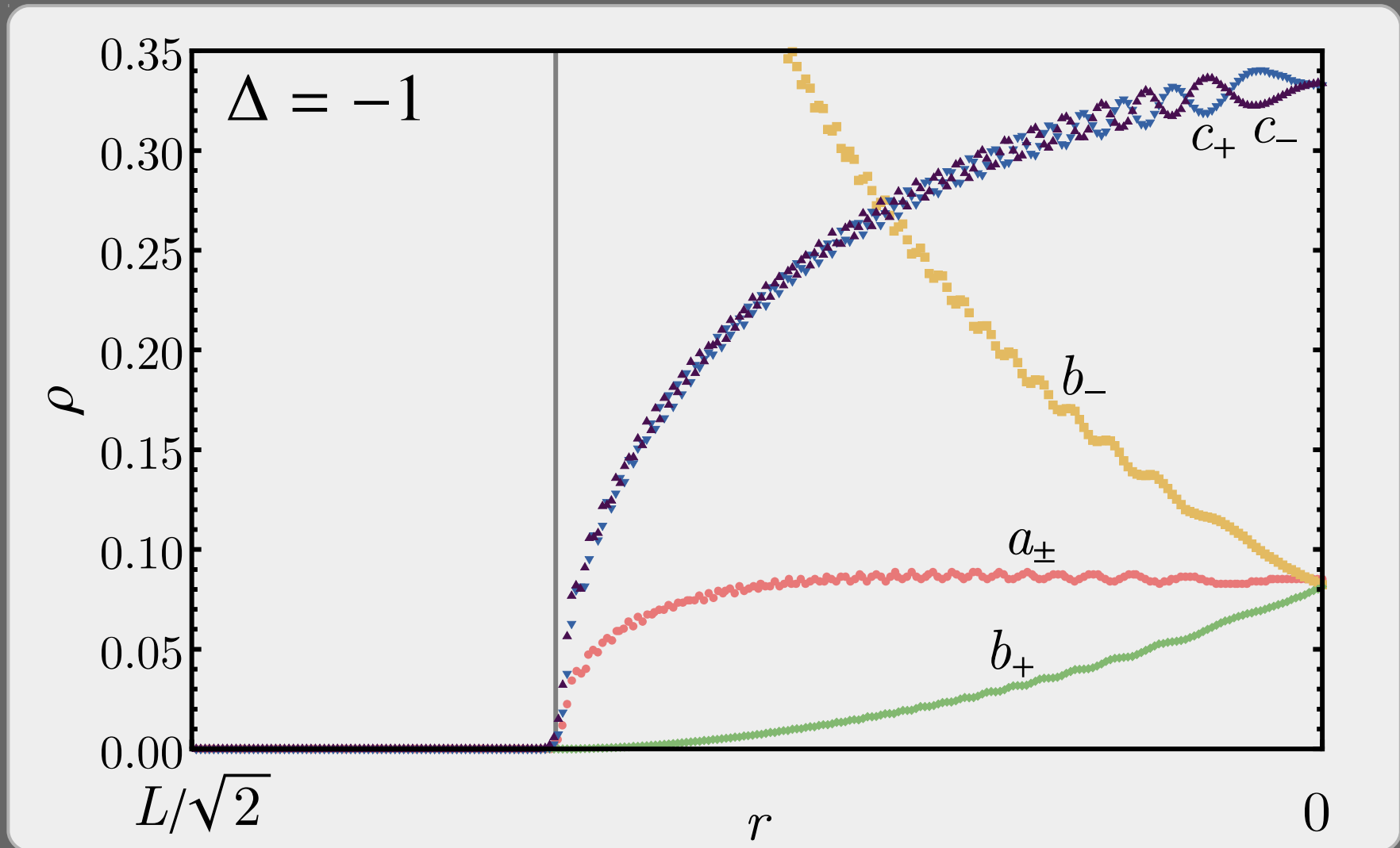


Phase coexistence & arctic curves



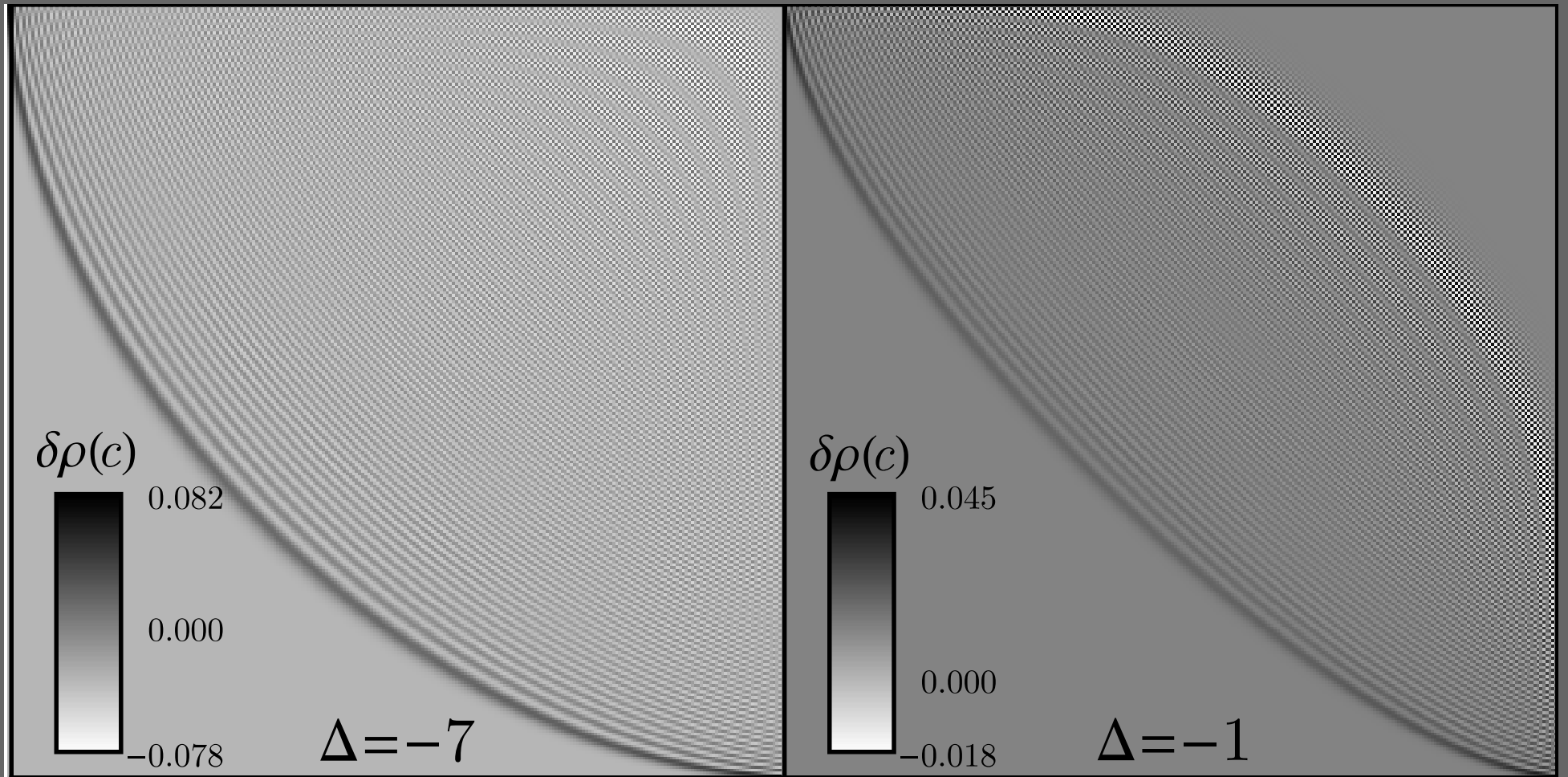


Vertex-density oscillations along diagonal



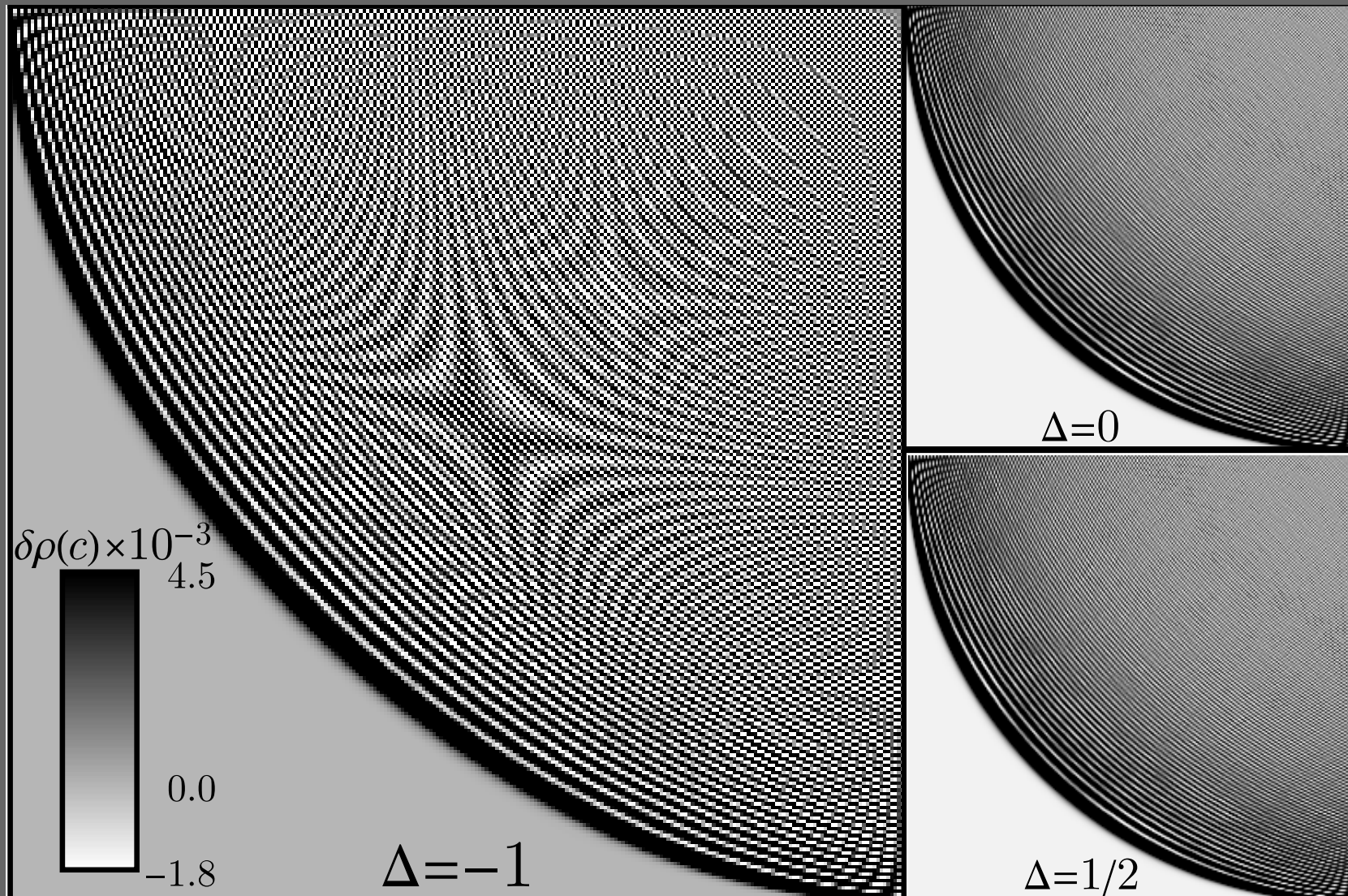


$\delta\rho(c)$ -profile: F and AF oscillations





$\delta\rho(c)$ profile, truncated: higher oscillations





Summary

- The **six-vertex model** is **simple**, yet has **rich physics**
- The **macroscopic properties** of a physical model may **depend** on choice of **boundary conditions**
- **Domain walls** allow for many **exact results**, and a lot remains **to be explored**
- The **temperate region** has a **intricate structure**, including F, AF and higher **oscillations** at finite size



Future directions

- Analytic understanding of
 - Curve bounding AF region
 - Oscillations
- Explore other boundary conditions
 - Numerically
 - Analytically (integrability, matrix models, ...)
- Upgrade to solid-on-solid models