ASYMPTOTIC REPRESENTATION THEORY OF SYMMETRIC GROUPS

FURTHER READING

PIOTR ŚNIADY

The following list is intended for outsiders who would like to peek into a new area. For this reason I tried to list mostly expository papers and avoid serious research papers.

FURTHER READING TO LECTURE 1 AND LECTURE 2

- short survey paper *Combinatorics of asymptotic representation theory*, to appear in proceedings of European Congress of Mathematics 2012, also available as
  http://arxiv.org/abs/1203.6509

  transparencies to this talk avalilable as
  http://www.6ecm.pl/docs/Sniady.pdf

- for those not afraid of Polish language: *Asymptotyczna teoria reprezentacji grup permutacji* Wiad. Mat. 45 (2009), no. 2, 171–193.
  http://wydawnictwa.ptm.org.pl/index.php/wiadomosci-matematyczne/article/viewArticle/79

- transparencies from some other talks are available at
  http://www.math.uni.wroc.pl/~psnia/slajdy/index.html

FURTHER READING TO LECTURE 1

- for modern approach to representation theory based on Jucys-Murphy elements I recommend the book by Ceccherini-Silberstein, Scarabotti, Tolli, *Representation theory of the symmetric groups. The Okounkov-Vershik approach, character formulas, and partition algebras*. Cambridge Studies in Advanced Mathematics, 121. Cambridge University Press, Cambridge, 2010

- for more on functionals of shape:
  Characters of symmetric groups in terms of free cumulants and Frobenius coordinates (with Valentin Féray and Maciej Dołęga), DMTCS Proceedings, 21st International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC 2009)
  http://www.dmtcs.org/dmtcs-ojs/index.php/proceedings/article/view/dmAK0128

  long version:
  Explicit combinatorial interpretation of Kerov character polynomials as numbers of permutation factorizations (with Valentin Féray and Maciej Dołęga), Adv. Math. 225 (2010), no. 1, 81-120

http://dx.doi.org/10.1016/j.aim.2010.02.011
also available as http://arxiv.org/abs/0810.3209

FURTHER READING TO LECTURE 2

- on free cumulants: two page haiku style expository paper *What is...free cumulant* (with Jonathan Novak), Notices of the AMS Volume 58, Number 2, pp. 300–301
  http://www.ams.org/notices/201102/rtx110200300p.pdf

- combinatorial interpretation of Kerov polynomials:
  Characters of symmetric groups in terms of free cumulants and Frobenius coordinates (with Valentin Féray and Maciej Dołęga), DMTCS Proceedings, 21st International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC 2009)
  http://www.dmtcs.org/dmtcs-ojs/index.php/proceedings/article/view/dmAK0128

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  http://dx.doi.org/10.1016/j.aim.2010.02.011
  also available as http://arxiv.org/abs/0810.3209

FURTHER READING TO LECTURE 3

- *Jeu de taquin dynamics on infinite Young tableaux and second class particles* (with Dan Romik) http://arxiv.org/abs/1111.0575

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