



## From the Pearcey to the Airy process

Submitted by Emmanuel Lemoine on Thu, 12/05/2013 - 15:32

Titre	From the Pearcey to the Airy process
Type de publication	Article de revue
Auteur	Adler, Mark [1], Cafasso, Mattia [2], Van Moerbeke, Pierre [3]
Pays	Etats-Unis
Editeur	Institute of Mathematical Statistics (IMS)
Ville	Seattle
Type	Article scientifique dans une revue à comité de lecture
Année	2011
Langue	Anglais
Date	2011
Pagination	1048 - 1064
Volume	16
Titre de la revue	Electronic Journal of Probability
ISSN	1083-6489
Mots-clés	Airy process [4], Dyson's Brownian motions [5], Pearcey process [6]
Résumé en anglais	Putting dynamics into random matrix models leads to finitely many nonintersecting Brownian motions on the real line for the eigenvalues, as was discovered by Dyson. Applying scaling limits to the random matrix models, combined with Dyson's dynamics, then leads to interesting, infinite-dimensional diffusions for the eigenvalues. This paper studies the relationship between two of the models, namely the Airy and Pearcey processes and more precisely shows how to approximate the multi-time statistics for the Pearcey process by the one of the Airy process with the help of a PDE governing the gap probabilities for the Pearcey process.
URL de la notice	<a href="http://okina.univ-angers.fr/publications/ua69">http://okina.univ-angers.fr/publications/ua69</a> [7]
Lien vers le document	<a href="http://ejp.ejpecp.org/article/view/898/1104">http://ejp.ejpecp.org/article/view/898/1104</a> [8]

### Liens

[1] [http://okina.univ-angers.fr/publications?f\[author\]=18111](http://okina.univ-angers.fr/publications?f[author]=18111)

[2] <http://okina.univ-angers.fr/mattia.cafasso/publications>

[3] [http://okina.univ-angers.fr/publications?f\[author\]=314](http://okina.univ-angers.fr/publications?f[author]=314)

[4] [http://okina.univ-angers.fr/publications?f\[keyword\]=19866](http://okina.univ-angers.fr/publications?f[keyword]=19866)

[5] [http://okina.univ-angers.fr/publications?f\[keyword\]=19867](http://okina.univ-angers.fr/publications?f[keyword]=19867)

[6] [http://okina.univ-angers.fr/publications?f\[keyword\]=19868](http://okina.univ-angers.fr/publications?f[keyword]=19868)

[7] <http://okina.univ-angers.fr/publications/ua69>

[8] <http://ejp.ejpecp.org/article/view/898/1104>

Publié sur *Okina* (<http://okina.univ-angers.fr>)