The Annals of Probability
2008, Vol. 36, No. 5, 1998
DOI: 10.1214/07-AOP378
Main article DOI: 10.1214/009117906000000791
© Institute of Mathematical Statistics, 2008

CORRECTION

CENTRAL LIMIT THEOREMS FOR GAUSSIAN POLYTOPES

Ann. Probab. **35** (2007) 1593–1621

BY IMRE BÁRÁNY AND VAN VU

Hungarian Academy of Sciences and Rutgers University

In our paper [1], we prove the central limit theorem for the number of j-dimensional faces, $f_j(K_n)$, $j = 0, 1, \ldots, d-1$, and for the volume, $\mathrm{Vol}(K_n)$, of the Gaussian random polytope K_n. Here, K_n is just the convex hull of n random and independent Gaussian vectors from R^d.

There is a nonmathematical (and very unfortunate) error on page 1595 of the paper. There, we say that Irene Hueter's proof of the central limit theorem for $f_0(K_n)$ in [2] and [3] contains a gap. This statement is false—her proof is correct. Our error is due to an unfortunate misunderstanding and the mixing up of two results from [2] and [3]; see also comments in [4]. So, besides apologies, this correction note is also an acknowledgment of priority: the first proof of the central limit theorem for $f_0(K_n)$, the number of vertices of the Gaussian random polytope, is due to Hueter in [3].

REFERENCES

[1] BÁRÁNY, I. and VU, V. H. (2007). Central limit theorems for Gaussian polytopes. *Ann. Probab.* **35** 1593–1621. MR2330981

[2] HUETER, I. (1994). The convex hull of a normal sample. *Adv. in Appl. Probab.* **26** 855–875. MR1303866

[3] HUETER, I. (1999). Limit theorems for the convex hull of random points in higher dimensions. *Trans. Amer. Math. Soc.* **351** 4337–4363. MR1670156

[4] HUG, D. and REITZNER, M. (2005). Gaussian polytopes: Variances and limit theorems. *Adv. in Appl. Probab.* **37** 297–320. MR2144555

RÉNYI INSTITUTE OF MATHEMATICS
HUNGARIAN ACADEMY OF SCIENCES
PO BOX 127
1364 BUDAPEST
HUNGARY
AND
DEPARTMENT OF MATHEMATICS
UNIVERSITY COLLEGE LONDON
GOWER STREET
LONDON WC1E 6BT
UNITED KINGDOM
E-MAIL: barany@renyi.hu

DEPARTMENT OF MATHEMATICS
RUTGERS UNIVERSITY
110 FRELINGHUYSEN
PISTACAWAY, NEW JERSEY 08854
USA
E-MAIL: vanvu@math.rutgers.edu

Received October 2007; revised October 2007.