

**CORRIGENDUM TO THE PAPER  
“THE D.R.E. DEGREES ARE NOT DENSE”**

S. BARRY COOPER, LEO HARRINGTON, ALISTAIR H. LACHLAN,  
STEFFEN LEMPP, AND ROBERT I. SOARE

ABSTRACT. We indicate how to fix an error in the proof of the main theorem of our original paper, pointed out to us by Yong Liu and Keng Meng Ng.

The main result of our paper [1] read as follows:

**Main Theorem.** *There is an incomplete d.c.e. degree maximal in the  $n$ -c.e. degrees (for all  $n \geq 2$ ) as well as in the  $\omega$ -c.e. degrees. Thus the  $n$ -c.e. degrees (for  $n \geq 2$ ) and the  $\omega$ -c.e. degrees are not dense.*

The error occurs in section 9, Cases 2 and 3 of the construction: A controller strategy  $\xi$  may have finite outcome waiting forever for computations for all the higher-priority destroyer strategies to have computations at  $\xi$ 's witness  $x$ , but the reason for the indefinite wait may be that at least one of these computations is destroyed by the corresponding destroyer strategy at an earlier substage of the current stage. Of course, this would mean that the destroyer strategy should not have destroyed the computation but have let the controller strategy  $\xi$  take charge as long as all the other desired computations for  $x$  converge. Thus the controller strategy may have finite outcome waiting without any  $\mathcal{R}$ -requirement being satisfied, and so there may be infinitely many controller strategies along the true path after all, contrary to the remark at the end of section 10.

There is a very simple fix to this slight but crucial error: During the course of a stage, don't let any destroyer strategy destroy its computation until the end of the stage so that a controller strategy can see all potential computations it may need and take charge at that time.

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The rest of the proof then works as outlined in section 10 (about the verification).

#### REFERENCES

- [1] Cooper, S. Barry; Harrington, Leo; Lachlan, Alistair H.; Lempp, Steffen; Soare, Robert I., *The d.r.e. degrees are not dense*, Ann. Pure Appl. Logic **55** (1991), 125–151.

SCHOOL OF MATHEMATICS, UNIVERSITY OF LEEDS, LEEDS LS2 9JT, UNITED KINGDOM

DEPARTMENT OF MATHEMATICS, UNIVERSITY OF CALIFORNIA-BERKELEY, 719 EVANS HALL #3840, BERKELEY, CA 94720-3840, USA

*E-mail address:* `leo@math.berkeley.edu`

DEPARTMENT OF MATHEMATICS, SIMON FRASER UNIVERSITY, 8888 UNIVERSITY DRIVE, BURNABY, B.C. V5A 1S6, CANADA

*E-mail address:* `alistair@sfu.ca`

DEPARTMENT OF MATHEMATICS, UNIVERSITY OF WISCONSIN, MADISON, WISCONSIN 53706-1325, USA

*E-mail address:* `lempp@math.wisc.edu`

*URL:* <http://www.math.wisc.edu/~lempp>

DEPARTMENT OF MATHEMATICS, UNIVERSITY OF CHICAGO, 5734 S. UNIVERSITY AVENUE, CHICAGO, IL 60637, USA

*E-mail address:* `soare@uchicago.edu`