

1 **Modeling performance improvement via training in a controlled cable**
2 **logging operation**

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12 **ABSTRACT**

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14 This paper gives evidence of improvement in cable logging productivity through training on a
15 controlled harvesting site. A 1:3 scale tower yarder modeled on the Owren T400 has been
16 used as a training tool. The study collected the performances of four trainees (with different
17 levels of experience) and a trainer. The data were analysed using mixed effect models and
18 results indicate that regardless the previous levels of experience both a beginner, and a part-
19 time machine operator, rapidly approached the time consumption and line tension profiles of
20 an expert. The safety was assessed through the dispersion of the standard deviation.
21 Smoothing tension spikes through training on the mini-yarder is likely to prove valuable in
22 preventing downtime, reducing the risk of accidents, and increasing yarder productivity.

23 **Keywords:** cable-yarding , training, productivity, mixed models, steep terrain.
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