



The Applied Probability Society

presents its

2019 Best Publication Award

to

**David Goldberg, Dmitriy Katz-Rogozhnikov,
Yingdong Lu, Mayank Sharma, Mark Squillante
and Linwei Xin**

for their series of papers:

Asymptotic optimality of constant-order policies for lost sales inventory models with large lead times. Mathematics of Operations Research. 41(3) 898 – 913, 2016

Optimality gap of constant-order policies decays exponentially in the lead time for lost sales models. Operations Research. 64(6) 1556 – 1565, 2016

Asymptotic optimality of Tailored Base-Surge policies in dual-sourcing inventory systems. Management Science. 64(1) 437 – 452, 2018

The Award recognizes an outstanding contribution to the field of Applied Probability during the years 2015 – 2018.

A central model in inventory theory, where demand that cannot immediately be met is lost, was among two inventory models introduced in 1958 by Karlin and Scarf. The corresponding stochastic optimization problem is known to suffer from the curse of dimensionality. Due to its practical significance and theoretical interest, this problem has attracted many researchers over the years but remained open. In 2004, Reiman introduced a simple constant order policy and showed that it could sometimes outperform the standard base-stock policy. In a substantial development, the above series of papers addressed an asymptotic regime where the lead time grows without bound, proving that the constant order policy is in fact asymptotically optimal in this regime. Further significant progress on large lead time asymptotics and on related models was also carried out. The Best Publication Award is awarded for these papers that have significantly advanced the state of the art and opened new vistas for further progress in inventory theory.

The APS Prize Committee:

Rami Atar, Chair
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(*) Declared a conflict of interest