

# **Abstract**

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## **Amplified Spontaneous Emission Noise Power in Distributed Raman Amplifiers**

The noise accompanying an optically amplified signal plays an important role in understanding the basic properties of the gain medium. In this paper, we demonstrate an analytical formalism and a numerical integration of the amplified spontaneous emission (ASE) noise power for distributed Raman amplifier (DRA). Three types of distributed Raman amplifiers forward, backward and bidirectional pumping configurations, are simulated and compared.