

In this work, we propose a generalized few-shot transfer learning architecture based on a Semi-Supervised Self-Normalizing Neural Network (SS-NN) that leverages internal EDFA ...

The research focuses on developing a DNN model to accurately predict the gain characteristics of Erbium-Doped Fiber Amplifiers (EDFAs) across 95 channels in Wavelength-Division Multiplexing ...

Using the dataset and DNN-based EDFA model described above, we first investigate for a given (pre-trained) source model, how much new data is needed from a target EDFA.

A long term partnership approach between the French and Czech nuclear industries supported by a tailor-made Czech localisation process enhancing economic value for the Czech Republic.

In this paper, we implement and study a novel semi-supervised, self-normalizing NN approach (hereafter referred to as the SS-NN model) that characterizes the wavelength-dependent gain of an EDFA ...

We showed that the EDFA gain models can be transferred between different EDFAs of the same type, different gain settings on the same EDFA, and different EDFA types.

In this work, we propose a simple NN-based EDFA gain model which not only accurately pre-dicts the performance of the specific physical de-vice it is trained on, but it also generalizes well to different ...

In this paper, we firstly summarize the underlying principles and structures of EDFA, and introduce the gain performance and challenges in modeling. Then, we review the EDFA gain modeling methods.

To improve network resource utilization, machine learning (ML) is used to accurately model optical amplifiers such as erbium-doped fiber amplifiers (EDFAs), which impact end-to-end system ...

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