

Editorial

We bring the first issue of this volume of the **Transactions on Machine Design** with the below explained papers.

In the first paper on “**Beam fluctuations and laser beam expansion models**”, the authors explained the minimum divergence of the laser beam which fulfil the power design of the laser communication system. The laser beam divergence produced the solution to the power design.

In the next paper on “**Noise performance and error probability measurement using energy balance**” the authors measured the echo effect in the reverse channel in CATV. The models and the distribution functions are explained with the properties and the signal to interference ration is also found. The noise emission is consistently recorded and the experimental results are produced.

The paper on “**Temperature measurement using neural network and prediction of external noise**” has presented the microwave-based noise temperature which predicts the external noise level and the receiving point. With the help of the Multilayer perceptron network, the authors have created the neural network model for temperature calculation. Then the authors have presented the basic design used and training results and testing data in different parts.

In the last paper on “**The mechanical design creation of the overhead transmission line**”, the authors have produced the overhead transmission line mechanical design with the help of the linear expansion of the thermal resistant conductors. The data about the thermal resistant conductor at various tension levels and temperatures is generated in the work. The experimental results are recorded by the authors with data at many transmission lines.

We will bring more studies in the forthcoming issues.

Editors