SEMINAR

Asst.Prof. Mahmut Bağcı
Yeditepe University

Title: Adaptive control and self-tuning fiber lasers using multiple transmission filters

Abstract: An adaptive control and self-tuning procedure is developed to mode-lock fiber laser systems using multiple transmission filters. To recognize average cavity birefringence of multi-filter laser configurations, we propose three classification algorithms that are uniform selection of modes, division of main library to sub-libraries and dynamic library selection from main library. A maximum seeking algorithm is constructed to determine optimal (maximal) waveplate(s) and polarizer(s) setting and, the adaptive control and self-tuning scheme is designed as a combination of maximum seeking and dynamic library selection algorithms. Numerical implementations show that the proposed self-tuning scheme achieves to keep multi-filter laser systems mode-locked with high pulse energies circumventing the multi-pulsing instability.

***Date*: 28 April 2021 Wednesday**

***Seminar*: 14:30-15:30**

***Place*: Zoom**

https://itu-edu-tr.zoom.us/j/94647662490?pwd=c0pvZ1Y5T0dSOVc2UUpjblZ3TjgxZz09

Meeting ID: 946 4766 2490

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***Contact*: kayah17@itu.edu.tr**