



# ODTU-Bilkent Algebraic Geometry

## “On special submanifolds of the Page space”

By

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**Abstract:** Page manifold is the underlying differentiable manifold of the complex surface, obtained out of the process of blowing up the complex projective plane, only once. This space is decorated with a natural Einstein metric, first studied by D.Page in 1978.

In this talk, we study some classes of submanifolds of codimension one and two in the Page space. These submanifolds are totally geodesic.

We also compute their curvature and show that some of them are constant curvature spaces.

Finally, we give information on how the Page space is related to some other metrics on the same underlying smooth manifold.

This talk is based on joint work with R.Sarı.

Related paper may be accessed from <https://arxiv.org/abs/1608.03252>

Kalafat, Sarı - On special submanifolds of the Page space. Differential Geom. Appl. To appear. 2020

Despite working on basic submanifolds, we introduce a variety of mutually-independent techniques, like graphic illustrations, physicist computations, Teichmüller space, 3- manifold topology, ODE systems etc. So that should not be confused with dry, computational diff.geo. involving only symbolic manipulations, meaningless mess of equalities followed by equalities. We always consider the global topology of the submanifold for example, and deal primarily with compact examples.

**Date:** 27 November 2020, Friday

**Time:** 15:40

**Place:** Zoom

To request the event link, please send a message to [sertoz@bilkent.edu.tr](mailto:sertoz@bilkent.edu.tr)