

ANALYSIS, TOPOLOGY AND  
APPLICATIONS  
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BOOK OF ABSTRACTS

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### Topology and soft topology

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**ABSTRACT:** Molodtsov [1] initiated the concept of soft sets as a completely different approach for dealing with uncertainties, and over the past few years, the fundamentals of the soft set theory have been studied by many authors. Since the concept of soft topology was introduced by Shabir and Naz [2], many terms of general topology have found their analogy in soft topological spaces. There are several papers that document certain problems relating to the fundamentals of the soft set theory and soft topological spaces. Matejdes [3] also states that a soft topology is nothing more than a topology on Cartesian product, and each soft topological concept has its topological equivalent. Recently published works by Matejdes [4], [5], [6] also document that soft topology is basically part of general topology, and concepts of soft topology can be reduced to the corresponding concepts in topology by identifying a set valued mapping with its graph.

**Keywords:** set valued mapping, topology on Cartesian product, soft set, soft topology

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- [4] Matejdes: Methodological remarks on soft topology. Soft Comput. 25 (2021), 4149-4156.
- [5] Matejdes M.: Soft homogeneity of soft topological sum. Soft Comput. 25 (2021), 8875-8881
- [6] Matejdes M.: On some operations on soft topological spaces. Filomat 35(5) (2021), 1693-1705.

### Averaged Gaussian quadrature rule for trigonometric polynomials

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#### ABSTRACT:

In this paper we introduce anti-Gaussian quadrature rules for trigonometric polynomials. Special attention is paid to even weight functions on  $[-\pi, \pi)$ . We prove the main properties of such quadrature rules and present numerical method for their construction. Also, we introduce averaged Gaussian quadrature formula for trigonometric polynomials. Some numerical examples are included.

**Keywords:** anti-Gaussian quadrature rules, recurrence relation, averaged Gaussian formula

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