
**Einladung zu einem Vortrag
im Rahmen des DK-Seminars des Karl Popper Kollegs von**

Dipl.-Ing. Dr. techn. Roswitha Rissner
TU Graz
zum Thema
**INTEGER-VALUED POLYNOMIALS – CLASSICAL TOPICS,
MODERN APPROACHES AND OUTLOOK**

Ort: I.2.01 der Universität Klagenfurt

Zeit: Mittwoch, 11. Oktober 2017, um 10 Uhr s.t.

Kurzfassung:

The history of integer-valued polynomials can be traced back to its roots to the 17th century when the binomial polynomials $\binom{x}{n} = \frac{x(x-1)(x-2)\dots(x-n+1)}{n!}$ have been used for interpolation and calculation of mathematical tables by Newton, Gregory and others. In the early 20th century, Pólya and Ostrowski rediscovered them for their relevance in number theory. They began to investigate integer-valued polynomials on rings of algebraic integers OK in a number field K , that is, the set of a polynomials $f \in K[x]$ which satisfy $f(OK) \subseteq OK$.

Motivated by their work, mathematicians have been studying the ring of integerevalued polynomials on a domain D which is commonly defined as

$$\text{Int}(D) = \{f(x) \in K[x] \mid f(D) \subseteq D\}$$

where K is the quotient field of D . Moreover, variations of this concept have been investigated such as the ring of integer-valued polynomials on square matrices with entries in D (or on any other D -algebra A). The purpose of this talk is to give an introduction to number theoretic and algebraic aspects of rings of integer-valued polynomials. Particular focus is set on the results of my own research and open questions in this area.

Das Institut für Mathematik freut sich auf Ihren Besuch.

<https://www.math.aau.at/>