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L. Labyrinth theory (in the narrower sense)

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Symbols introduced within the text

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Some predefined symbols

$\epsilon, \subseteq, \cup, \cap, \setminus, *, X$	set theoretic relations, operations
\emptyset	empty set
$\text{card}(S)$	cardinality of the set S
$\text{max}(S), \text{min}(S)$	maximum, minimum of the set S
\mathbb{N}, \mathbb{N}^+	set of all (positive) natural numbers
\mathbb{I}	set of all integers
$\mathbb{R}, \mathbb{R}^+, \mathbb{R}^-$	set of all (positive, negative) real numbers
$ z $	absolute value, euclidean norm of z
$[x, y]$	closed interval in \mathbb{R}
X^*	set of all words over the alphabet X
Λ	empty word
X^+	$= X^* \setminus \{ \Lambda \}$
$\text{len}(w)$	length of the word w
$w_1 \cdot w_2, w_1 w_2$	concatenation of words
w^k	k th power of the word w
w^∞	infinite power (yields a sequence)
$X^{\mathbb{N}}$	set of all (infinite) sequences over X
X^k	k th cartesian power of X , or $\{ w \in X^* : \text{len}(w) = k \}$ (context-dependent)
$f : S_1 \longrightarrow S_2$	f is a mapping of S_1 into S_2
$f(s), f(S)$	image of $s \in S_1$, complete image of $S \subseteq S_1$
f/S	restriction of f to $S \subseteq S_1$
$f \circ g$	product of mappings (f after g)
f^k	k th power of the mapping f

L. A. Kalužnin / P. M. Beleckij / V. Z. Fejnberg

Kranzprodukte

Das vorliegende Buch behandelt Kranzprodukte von Permutationsgruppen (und Transformationsgruppen) und unterscheidet sich damit von vielen anderen Publikationen, in denen Kranzprodukte anderer algebraischer Strukturen (z.B. abstrakter Gruppen oder Halbgruppen) betrachtet werden. Kranzprodukte von Permutationsgruppen wurden unter dem Namen "produit complèt" von L. A. Kaloujnine (= Kalužnin) und M. I. Krasner in den 40er Jahren eingeführt. Historisch kann man den Begriff des Kranzproduktes bis in das 19. Jahrhundert zurückverfolgen. Anwendungen des Kranzproduktes für Permutationsgruppen gibt es in der mathematischen Chemie und der Informatik. Innerhalb der Mathematik finden Kranzprodukte Anwendung besonders in der abstrakten Gruppentheorie wie auch in der Theorie der Permutationsgruppen und führten zu wichtigen Ergebnissen in beiden Theorien (Schreiersches Gruppenerweiterungsproblem, Geometrie ultrametrischer Räume). Das Buch wendet sich vor allem an Studenten und Hochschullehrer auf dem Gebiet der reinen und angewandten Mathematik, besonders der Informatik, aber auch an Mathematiker und Informatiker mit algebraischen Interessen.
Bd. 101, 167 S., DDR 17,50 M, Ausland 17,50 DM,
ISBN 3-322-00425-2

G. Schaar / M. Sonntag / H.-M. Teichert

Hamiltonian Properties of Products of Graphs and Digraphs

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Bd. 108, 148 S., 1988, DDR 15,50 M, Ausland 15,50 DM,
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Seminar Analysis of the Karl-Weierstraß-Institute 1986/87

Ed. by B.-W. Schulze and H. Triebel

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