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(Publication of these summaries is permitted)

LEO BOČEK, Praha: *Untermannigfaltigkeiten von homogenen Räumen.* Czech. Math. J. *21 (96)*, (1971), 1—4. (Originalartikel.)

Für Untermannigfaltigkeiten des homogenen Raumes G/H sind Invarianten gefunden, die diese bis auf Translation mittels eines Elementes der Gruppe G eindeutig bestimmen. Im Falle des euklidischen Raumes reduzieren sich diese Invarianten auf die bekannten metrischen Tensoren.

KARL R. GENTRY, HUGHES B. HOYLE, III. Greensboro: *Somewhat continuous functions.* Czech. Math. J. *21 (96)*, (1971), 5—12. (Original paper.)

In this paper the concepts of somewhat continuous and somewhat open functions are studied. The main significance of these functions is in preserving some descriptive properties of sets, e.g. density, nowhere density, etc. The idea of such functions appeared first in some papers of Z. Frolík and it is close to Youngblood's weak equivalence of topologies. Besides other examination, the authors show that somewhat continuity of homomorphisms of topological groups implies continuity, on the other hand somewhat homeomorphisms need not preserve elementary separation properties.

IVAN DOBRAKOV, Bratislava: *On representation of linear operators on* $C_0(T, \mathbf{X})$. Czech. Math. J. *21 (96)*, (1971), 13—30. (Original paper.)

Let T be a locally compact Hausdorff topological space, let $\mathbf{X}$ be a Banach space and let $C_0(T, \mathbf{X})$ denote the Banach space of $\mathbf{X}$ valued continuous functions on T tending to zero at infinity with the usual supremum norm. In this paper we investigate bounded linear operators on $C_0(T, \mathbf{X})$ by representing them as integrals with respect to Baire operator valued measures.

HUGHES B. HOYLE, III, Greensboro: *Function spaces for somewhat continuous functions.* Czech. Math. J. *21 (96)*, (1971), 31—34. (Original paper.)

The aim of the paper is the study of the subset of all somewhat continuous functions (this concept was introduced in another author's paper) in the space of all functions from one topological space into another one, especially its closedness and density in the topology of uniform convergence or in the graph topology.

BEDŘICH PONDĚLÍČEK, Poděbrady: *Contribution to the foundations of network theory using the distribution theory*, II. Czech. Math. J. *21 (96)*, (1971), 35—45. (Original paper.)

In author's former paper linear and continuous operators on the space of distributions have been studied. Let $\mathbf{D}^l$ be the set of all distributions f such that every f vanishes on some interval $(-\infty, a)$ which in general depends on f. In this paper we shall study analogous properties of linear and uniformly continuous operators on a space of distributions from $\mathbf{D}^l$.

IZU VAISMAN, Jassy: *Variétés Riemanniennes feuilletées.* Czech. Math. J. *21 (96)*, (1971), 46—75. (Mémoire scientifique original.)

Dans le § 1, on étudie les variétés différentiables munies, en même temps, d'une distribution régulière quelconque et d'une métrique riemannienne. Le résultat principal est la détermination d'une connexion linéaire canoniquement associée. Dans le § 2, on considère le cas où la distribution est intégrable et définit donc un feuilletage. Le § 3 s'occupe de l'étude de la cohomologie à valeurs dans le faisceau de germes de fonctions différentiables, constantes sur les feuilles; on y donne des analogues du théorème de de Rham, de la théorie des formes harmoniques et du théorème de Bochner-Lichnerowicz et un nombre d'autres résultats. Enfin, dans le § 4, on étudie les transformations infinitésimales qui conservent en même temps le feuilletage et la métrique.

JOSEF KRÁL, JAROSLAV LUKEŠ, Praha: *On the modified logarithmic potential.* Czech. Math. J. *21 (96)*, (1971), 76—98. (Original paper.)

Necessary and sufficient conditions are established for the existence of angular limit values at η of the real part of Cauchy's type integrals with densities f satisfying the inequality $|f(\xi) - f(\eta)| \leqq \text{const.}\, p(\xi)$, where p is a given bounded lower-semicontinuous function on the contour of integration. If the contour satisfies these conditions and the density f satisfies the condition $|f(\xi) - f(\eta)| \leqq \theta(|\xi - \eta|)\, p(\xi)$, where θ is a continuous nondecreasing function, then sharper estimates are given for the real part of the resulting integral of the Cauchy type.

BEDŘICH PONDĚLÍČEK, Poděbrady: *A certain equivalence on a semigroup.* Czech. Math. J. *21 (96)*, (1971), 109—117. (Original paper.)

Necessary and sufficient conditions on a semigroup are determined in order that one of the Green relations contain the generating Schwarz's equivalence.

IVAN KOLÁŘ, Brno: *Complex velocities on real manifolds.* Czech. Math. J. *21 (96)*, (1971), 118—123. (Original paper.)

Complex velocities and complex contact elements of order r on the real manifold of class C^r are defined. The general concept of a complex r-jet of a real manifold of class C^r into another manifold of the same kind is also introduced. As an example, the asymptotic directions at an elliptic point are discussed from this point of view.

IVAN KOLÁŘ, Brno: *On the torsion of spaces with connection.* Czech. Math. J. *21 (96)*, (1971), 124—136. (Original paper.)

At the beginning, a new approach to the higher order connections on principal fibre bundles is explained. Then it is shown that the torsion form of a space with connection vanishes if and only if the development of this space by means of the prolonged connection is holonomic. The reduced torsion form of a manifold with connection is also introduced and an analogous condition for it to vanish is deduced.