

Orlicz, Michał

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 Orlicz, Michał and Orliczowa, Jadwiga. Występowanie sadzi w Tatrach. [Hoar frost deposits in the high Tatra Mountains.] *Przeegląd Meteorologiczny i Hydrologiczny*, Warsaw, 7(3/4):107-140, 1954. 11 figs., 26 tables, 21 refs. In Polish; French summary p. 132-140. DLC, DWB—Results of a very detailed study of hoar frost, a rather frequent phenomenon in the Tatra Mountains, carried out at the meteorological stations of Kasprowy Wierch in Poland (1988 m alt.) and Lomnica in Czechoslovakia (2635 m alt.) are presented in a number of tables, graphs and maps with explanations. Hoar frost formation often causes high tension lines to break interrupting the supply of electric current, and also results in damage to mountain forests. The paper deals with: 1) general information on the study of hoar frost in mountains; 2) number of days (actual and average) with hoar frost at each of the stations during 1941-53; 3) the quantity of hoar frost deposited, shown in below: A) hoar frost formation...

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technics and forestry. Subject Headings: Hoar frost studies 2. Tatra Mountains, U.S.S.R. //

ORLICZ, M.

Professor Eugeniusz Romer; on the first anniversary of his death. p. 3.

PRZEGLAD GEOFIZYCZNY. (Polskie Towarzystwo Meteorologiczne i Hydrologiczne)  
Warszawa, Poland. Vol. 8, no. 1, 1955.

Monthly List of East European Accessions (EEAI) LC, Vol.9, no. 1, Jan. 1960.

Uncl.

ORLICZ Michal

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77-219  
 ORLICZ, Michal and ORLICZ, Jadwiga. Average temperature on *Polonia* slopes of the Tatra mountains. *Prace Instytutu Hydrologiczno-Meteorologicznego, Warszawa*, 4(3/4):233-235, 1953, 3 figs., 13 tables, 25 refs. English summary. D.W.B., D.L.C.—Results of a study of temperature inversions over the northern slopes of the Tatras based on some 10 thousand observations during 1949-1954, made at the meteorological stations of: *Kosciuszka* (61,000 m), *Zakopana* (833 m), *Anastolowa* (918 m), *Kalnica* (1073 m) and *Kasprowy Wierch* (1991 m). The author considers as inversions all cases when the air temperature read at a higher situated station is at least 0.1°C higher than it is at a lower station. The results presented in numerous tables and graphs are explained and discussed in detail. *Subject Headings*: 1. Surface inversions 2. Tatra Mts., Poland.—A.M.P.

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ORLICZ, M.

Eugeniusz Kmicikiewicz; an obituary. p. 2. (Gazeta Obserwator. I.I.H.M.,  
Vol. 10, No. 5, May 1957, Warsaw, Poland)

SO: Monthly List of East European Accessions (HEAL) LC, Vol. 6, no. 8, Aug 1957, Sect.

ORLICZ, M.

SCIENCE

Periodical: GAZETA OBSERWATORA. P.I.H.M. Vol. 11, no. 6, June 1958.

ORLICZ, M. A Polish-Czechoslovak conference on the cooperation in meteorology and climatology in the Tatra Mountain region. p. 14.

Monthly List of East European Acquisitions (EEAI), LC, Vol. 8, No. 3, May 1959  
Unclass.

ORLICZ, M.

SCIENCE

Periodical: GAZETA OŚPIEWATORA. P.I.H.M. Vol. 11, no. 8, Aug. 1958.

ORLICZ, M. High-Mountain Meteorologic Observatory on Kasprowy Wierch;  
on its 20th anniversary. p. 12.

Monthly List of East European Acessions (EEAI), LC, Vol. 8, No. 3, May 1959  
Unclass.

ORLICZ, M.; ZYCH, S.; PASZYNSKI, J.

The climatic conditions in Zakopane and its neighborhood, p. 271.

Panstwowy Instytut Hydrologiczno-Meteorologiczny. WIADOMOSCI SLUZBY HYDROLOGICZNEJ I METEOROLOGICZNEJ.  
Warszawa, Poland. Vol. 6, no. 5, 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 7, July 1950

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Orliez T Comments on Methods of Controlling Wood Drying Processes

Uwagi do metod kontroli przebiegu suszenia drewna: Przemysł DREWNY No. 7-8, 1951, pp. 171-175, No. 9, 1951, pp. 212-213

This is a critical comparison of methods used in controlling wood drying with T. Klosowick's new simplified method, the basis of which is provision to the personnel of the drying kiln with ready schedules and simplified calculations. The comparison deals with: 1. Means of determining moisture content, 2. the necessary number of controlling boards, 3. the accepted initial weight of controlling boards, 4. processes subjected to control, 5. specimens of control forms and allocation of control functions. Comments on Z. Ogiński's idea concerning increasing efficiency in the control of the process of kiln drying.

... the construction of controlling indexes... and the facilitation of...  
... Useful hints for...  
... control schedules



ORLICZ, T.

Influence of the mechanical efficiency of a vertical frame on  
the magnitude of stroke. p. 45. GOSPODARKA ZROLOWA. Vol. 99,  
No. 1, Jan/Feb 1956, Warszawa.

East European Accessions List (EEAL) Library of Congress  
Vol. 5, No. 11, August 1956.

ORLICZ, T.

TECHNOLOGY

Periodicals: NORMALIZACJA. Vol. 26, no. 10, Oct. 1958

ORLICZ, T. Terminology of the processing of lumber with cutting tools.  
p. 484.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 2,  
February 1959, Unclass.

ORLICZ, W

Orlicz, W. Une généralisation d'un théorème de MM. S. Banach et S. Mazur. Ann. Soc. Polon. Math. 19 (1946), 62-65 (1947).

Let  $V_p(f)$  denote for a function  $f(x)$  defined in  $a \leq x \leq b$ , the least upper bound of the sums  $\sum |f(x_i) - f(x_{i-1})|^p$  for subdivisions  $a = x_0 < x_1 < \dots < x_n = b$ ; write  $V(f)$  for  $V_1(f)$ . Moreover, given a sequence of functions  $f_n(x)$  in  $a \leq x \leq b$ , let  $S_n(x) = f_1(x)\epsilon_1(l) + \dots + f_n(x)\epsilon_n(l)$ , where  $\epsilon_i(l), \epsilon_i(l), \dots$  is the sequence of Rademacher functions in  $0 \leq l \leq 1$ . The author proves the following theorem (I). Suppose that, for all  $n$  and almost every  $l$ ,  $V_p(S_n) \leq M$ ; then there is a constant  $C_p \leq 8^p$  such that, for every subdivision  $a = x_0 < x_1 < \dots < x_n = b$ , (a) if  $p \geq 2$ ,

$$\sum (\sum |f_n(x_i) - f_n(x_{i-1})|^p) \leq MC_p,$$

(b) if  $1 \leq p \leq 2$ ,

$$\sum (\sum |f_n(x_i) - f_n(x_{i-1})|^p)^{1/p} \leq MC_p.$$

[The proof of (b) contains a misprint (twice): the exponents  $(2-p)/2$  and  $2/(2-p)$  are interchanged.] As a corollary of (I), the author obtains (II). If, for all  $n$  and almost every  $l$ ,  $V(S_n) \leq M$ , then  $\sum V^2(f_n) \leq 8M$ . This may be regarded as a greatly strengthened form of a theorem of Banach and Mazur [Studia Math. 4, 100-112 (1933), p. 108]; in the latter, the hypothesis is equivalent to the one obtained on substituting "every" for "almost every," and the conclusion is weakened to  $V(f_n) \rightarrow 0$ . L. C. Young.

Source: Mathematical Reviews, 1948, Vol. 9, No. 1

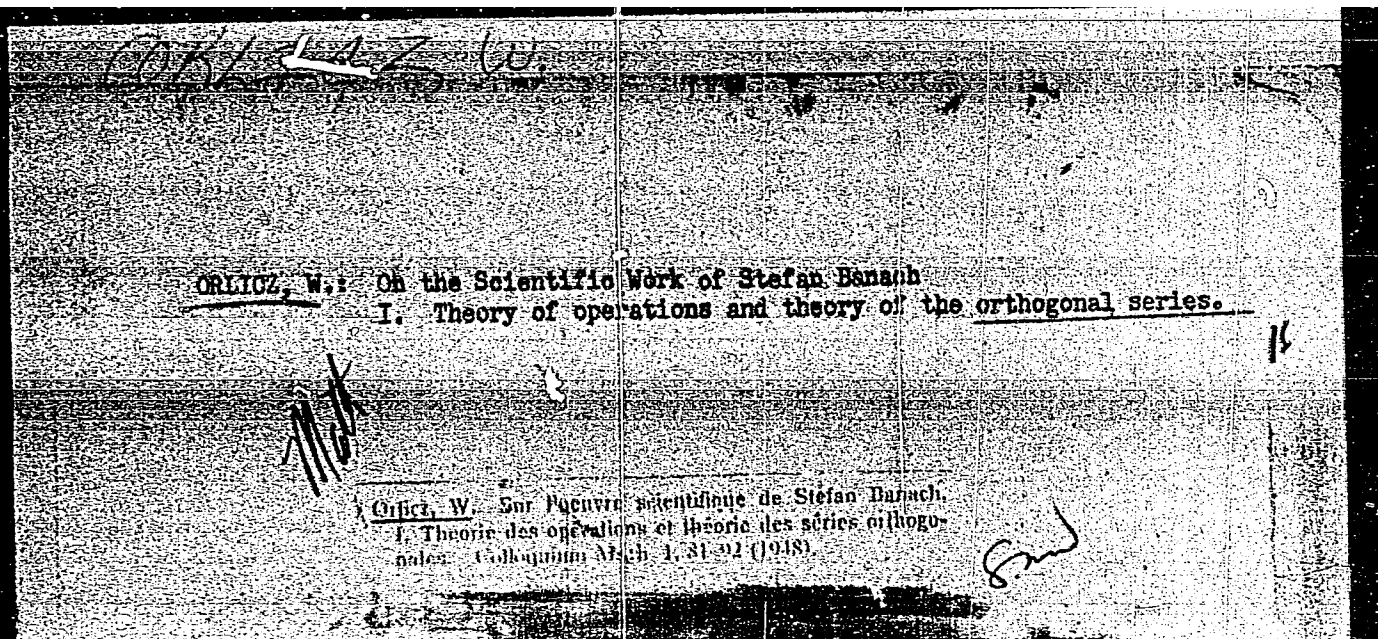
ORLICZ, WŁADYSŁAW

Orlicz, Władysław. Sur les fonctions continues non dérivables. *Fund. Math.* 34, 45-60 (1947).

The results obtained are intermediate between the actual construction of continuous nondifferentiable functions (like Weierstrass's function) and pure existence theorems (e.g., theorems of the type that in a suitably chosen complete metric space of continuous functions all functions with the exception of a set of first category are nondifferentiable). A typical example is the following theorem. If  $\varphi(x)$  is a continuous periodic function (not a constant) with continuous derivative for all  $x$ ,  $\alpha_n > 0$ ,  $\sum \alpha_n$  convergent,  $0 < \beta_1 < \dots < \beta_n < \dots < \beta_n \rightarrow \infty$ ,  $\alpha_n \beta_n > \epsilon > 0$ , and  $\eta_n = 0, 1$ , then the function  $\phi_\eta(x) = \sum_{n=1}^{\infty} \eta_n \alpha_n \varphi(\beta_n x)$  does not possess a derivative on the right at any  $x$  for all sequences  $\eta = \{\eta_n\}$  of a residual set in the space of all sequences  $\eta$  (where distance is defined by  $d(\eta', \eta'') = \sum_{n=1}^{\infty} 2^{-n} |\eta'_n - \eta''_n|$ ). Other types of functions investigated are  $\phi_\epsilon(x) = \sum_{n=1}^{\infty} \epsilon_n \alpha_n \varphi(\beta_n x)$ , where  $\epsilon_n = \pm 1$ , and  $f_\epsilon(x) = \sum_{n=1}^{\infty} \epsilon_n f_n(x)$ ,  $f_\eta(x) = \sum_{n=1}^{\infty} \eta_n f_n(x)$ , where  $f_n(x)$  are continuous and  $\sum_{n=1}^{\infty} |f_n(x)|$  is uniformly convergent for  $a \leq x \leq b$ .  
F. A. Behrend (Melbourne).

Source: *Mathematical Reviews*, 1948, Vol. 9, No. 1

(SM)



Orlicz, W.

Orlicz, W. Sur les opérations linéaires dans l'espace des fonctions bornées. *Studia Math.* 10, 60-89 (1948).

The space  $M_1(a, b)$  is defined as the space of real-valued measurable functions essentially bounded in an interval  $(a, b)$  in which the symbol  $x_n \rightarrow x_0$  means (1)  $x_n(t)$  are uniformly essentially bounded in  $(a, b)$ ; (2)  $\int_a^b |x_n(t) - x_0(t)| dt \rightarrow 0$  in measure on  $(a, b)$ . An operator  $U$  is called  $(M_1, Y)$  linear if it is additive and continuous from  $M_1$  to a space  $Y$  of type  $(N)$ . Representations of certain such operators have been given by Alexiewicz [*Ann. Soc. Polon. Math.* 10, 140-160 (1947); these *Rev.* 9, 96]. In this paper the author gives various types of sufficient conditions to insure the continuity of an additive operator  $U$  from  $M_1$  to  $Y$ . He considers in particular  $(N)$  spaces  $Y$  satisfying a certain property  $(Z)$  and spaces of real functions satisfying a property  $(Z_0)$ . Here  $Y$  has property  $(Z)$  if for any sequence  $\{y_i\}$  having the property that for every sequence  $\{e_i\}$ ,  $e_i = 0$  or  $1$ , the set  $\{\sum_{i=1}^n e_i y_i\}$  is bounded, then  $\sum_{i=1}^\infty e_i y_i$  exists. If  $Y$  is a space of real functions,  $Y$  has property  $(Z_0)$  if for every sequence  $\{y_i(t)\}$  such that for every  $\tau = \{e_i\}$ ,  $e_i = 0$  or  $1$ ,  $\lim_{n \rightarrow \infty} \int_a^b \tau_i y_i(t) dt = \int_a^b \tau_i y_i(t) dt$  in measure then  $\sum_{i=1}^\infty \tau_i y_i$  exists in  $Y$ . Many well-known function spaces have both properties.

For any space  $Y$  with property  $(Z)$  a sufficient condition that  $U$  be  $(M_1, Y)$  linear is  $x_n \rightarrow x_0$  implies  $\lim_{n \rightarrow \infty} \inf_{k \geq n} \|Ux_k\| \geq \|Ux_0\|$ . If  $Y$  is a function space with property  $(Z)$ , then if  $x_n \rightarrow x_0$  implies  $Ux_n \rightarrow Ux_0$  in measure,  $U$  is  $(M_1, Y)$  linear. If  $Y$  has property  $(Z_0)$   $U$  is  $(M_1, Y)$  linear if (1)  $y_n(t) \rightarrow y_0(t)$  in measure implies  $\lim_{n \rightarrow \infty} \inf_{k \geq n} \|y_k\| \geq \|y_0\|$ ; (2)  $x_n \rightarrow x_0$  implies  $Ux_n \rightarrow Ux_0$  in measure. The author applies these theorems and others of the same character to proving that certain types of integral operators from  $M_1$  to various function spaces are  $(M_1, Y)$  linear.

In the latter half of the paper he gives generalizations of the Banach-Steinhaus theorem to sequences of operators which are  $(M_1, Y)$  linear. If  $U_n$  is a sequence of operators  $(M_1, Y)$  linear and if  $Ux = \lim_{n \rightarrow \infty} U_n x$  for all  $x \in M_1$  then  $U$  is  $(M_1, Y)$  linear. For function spaces satisfying  $(Z_0)$  we usually need only  $U_n x \rightarrow Ux$  in measure. The author concludes by giving certain sufficient conditions for continuity of certain biadditive operators.

R. E. Fullerton.

Source: Mathematical Reviews.

Vol 0 No. 10

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Orlicz, W.

Orlicz, W. Sur quelques propriétés des fonctions de Baire périodiques. *Studia Math.* 10, 148-153 (1946).

The author proves again a theorem of his that for any measurable periodic function  $f(x)$  the relation

$$\limsup_{n \rightarrow \infty} f(\omega_n x + \theta_n) = \sup_L f(x)$$

holds almost everywhere ( $\sup_L$  denotes the essential least upper bound) and he shows that for Baire functions the assertion remains in force if every "exceptional set" which occurs is interpreted to mean a set of the first category. Also if a family  $\{f_n(x)\}$  is suitably compact, then the relation can be generalized to

$$\limsup_{n \rightarrow \infty} f_n(\omega_n x + \theta_n) = \limsup \sup_L f_n(x)$$

both for measurable and for Baire functions.  
S. Bochner (Princeton, N. J.).

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Source: Mathematical Reviews,

Vol. 11 No. 1

*Gopher, W.*

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**Mazur, S., et Orlicz, W.** Sur les espaces métriques linéaires. I. *Studia Math.* 10, 181-208 (1948).

The paper under review is the first of a series whose purpose is to generalize some Banach space theorems to the case of a locally convex topological vector space with a countable base of neighborhoods at the origin (in the authors' terminology). Their use of more general methods has also allowed the authors to extend the theory of linear equations to the theory of linear differential equations. In this paper, the authors have limited themselves to the presentation of some basic results and notions (for future reference) about topological vector spaces, and among other things, they establish the following propositions. Let  $M$  be a module over the topological ring  $R$  such that: (a)  $R$  possesses a countable base of neighborhoods at zero, and (b)  $M$  is complete. Assume further that  $M$  is endowed with a topology such that: (a')  $x+y$  is a function continuous in both  $x, y \in M$  and  $tx$  is a function continuous separately in  $t \in R$  and in  $x \in M$ , and (b')  $M$  possesses a countable base of neighborhoods at the origin. Then  $tx$  is continuous in both

arguments (the proof consists of an application of the Baire category argument to  $R$ ). If  $\{T_n\}$  is a sequence of topologies on the (real or complex) vector space  $X$ , each of which is compatible with some (sub-additive and homogeneous) pseudo-norm, then  $T = \cup T_n$  is compatible with some such pseudo-norm if and only if  $T = \cup T_n$  for some integer  $K \in \mathbb{N}$  ( $\cup$  denotes the supremum in the complete lattice of all topologies on  $X$ , the ordering among topologies being given by the inclusion relation between classes of open sets). This proposition is used by the authors to prove that certain topological vector spaces cannot be normed; in an equivalent form, this was also observed by G. W. Mackey [see *Trans. Amer. Math. Soc.* 57, 155-207 (1945), theorem VII-6; *ibid.* 6, 274]. A topological vector space possessing a countable base of neighborhoods at the origin has the property that the convex hull of every compact set is bounded if and only if it is locally convex. This is a converse to a well-known theorem due to Mazur [*Studia Math.* 2, 7-9 (1930)]. Other properties which are equivalent to local convexity or to normability are also discussed. The paper includes a list of examples. *J. Nishin.*

Source: *Mathematical Reviews*

Vol. 10, No. 9

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*1948*



Order 3. Une généralisation d'un théorème de Cantor-Lebesgue. Ann. Soc. Polon. Math. 21, 32-45 (1948).

A set B of real numbers is called a rational basis if every real number x has a (not necessarily unique) representation  $x = \sum r_n b_n$ , with  $b_n \in B$  and  $r_n$  rational; and the real functions  $f_j(x)$ ,  $j=1, \dots, k$ , are said to be linearly independent in the strong sense on the (finite or infinite) interval [a, b] if for every set  $\rho_1, \dots, \rho_k$  of real numbers, not all zero,  $\sum \rho_j f_j(x)$  is zero on at most a denumerable set in [a, b]. The following result is proved. Let  $f_j(x)$ ,  $j=1, \dots, k$ , be real functions on  $(-\infty, \infty)$ , of period 1, linearly independent in the strong sense on [0, 1], and discontinuous in at most a denumerable set. If for every x of a rational basis B, sequence (1)  $\sum_{n=1}^{\infty} a_n (f_j(nx + \theta_n))$  converges to zero [sequence (1) is bounded], then the sequences (2)  $a_n^{(j)}$  ( $j=1, \dots, k$ ) converge to zero [the sequences (2) are bounded]. Here  $\theta_n$  is any sequence of numbers and  $a_n$  any sequence for which  $a_n \neq 0$  and  $a_n \rightarrow +\infty$ . A corollary is the following generalization of the Cantor-Lebesgue theorem. Let  $f(x)$ ,  $g(x)$  be real functions on  $(-\infty, \infty)$ , of period 1, linearly independent in the strong sense on [0, 1], and discontinuous in at most a denumerable set. If  $\sum a_n (f(n\alpha) + b_n g(n\beta))$  converges for each x of a rational basis B, then  $a_n \rightarrow 0$ ,  $b_n \rightarrow 0$ .

I. M. Sheffer (State College, Pa.)

Source: Mathematical Reviews,

vol 10 No. 2

Sum 1949

Orlicz, W.

Alexiewicz, A., et Orlicz, W. Sur la continuité et la classification de Baire des fonctions abstraites. Fund. Math. 35, 105-126 (1948)

This is a paper on Banach-valued functions, but it ends up with the following theorem on numerical functions. For  $p \geq 1$ , if for a sequence of real functions  $f_n(u)$  on an interval we everywhere have  $\sum_n |f_n(u)|^p < \infty$ , then for a set of second category we also have  $\lim_{n \rightarrow \infty} \sum_n |f_n(u) - f_n(u_n)|^p = 0$ .

If  $X$  is a Banach space, and  $Y$  the space of functionals on it, let  $Y_0$  be a (nonclosed) linear subspace which is "weakly dense in  $Y$ " in the following sense: for  $x \in X, \epsilon > 0$ , there exists a  $f$  in  $Y_0$  such that  $|f(x) - \epsilon| \leq \|x\|, x$  in  $B, |f(x_0)| \geq \|x_0\| - \epsilon$ . Now, let  $x(u)$  be a function from an interval on some more general metric space to a separable  $X$ . If it is weakly continuous in the sense of  $f(x(u)) \rightarrow f(x(u_n))$  for  $f$  in  $Y_0$ , then strongly it belongs to the first Baire class. More generally if it is weakly in the  $\alpha$ -class it is strongly in the  $(\alpha+1)$ -class. But if its range of values is totally bounded, it remains in the  $\alpha$ -class strongly.

S. Bochner (Princeton, N. J.)

Source: Mathematical Reviews,

Vol. 10 No.

Orlicz, W.

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Orlicz, W. Linear operations in Saks spaces. I. Studia Mathematica 11, 237-272 (1950).

Let  $X$  be a normed linear space with norm  $\|\cdot\|$  (not necessarily complete),  $R$  the unit sphere of  $X$ , and a possibly different norm in  $X$ . In  $R$  define a metric  $d(x, y)$  by  $\|x - y\|$ . If in this metric,  $R$  is complete, we call it a Saks space  $X$ . The general plan behind Saks spaces is this. The norm  $\|\cdot\|$  has greater smoothness than the given norm  $\|\cdot\|$ . For example, if  $X$  is the space  $M$  of essentially bounded functions on  $[0, 1]$ , then  $\|x(t)\| = \text{ess sup}_{t \in [0, 1]} |x(t)|$ , and  $\|x(t)\| = \int_0^1 |x(t)| dt$ , etc. The following additional hy-

potheses concerning  $X$ , are often satisfied and prove useful. (Z<sub>1</sub>): Let  $K(x, \rho)$  be the open sphere, center  $x$ , radius  $\rho$  in  $X$ . Then for each  $x \in X$ ,  $\rho > 0$ , there is a  $\delta > 0$  such that  $K(0, \delta) \subset K(x, \rho) - K(x, \rho)$ . (Z<sub>2</sub>): If  $x_n \rightarrow 0$  in  $X$ , if  $\epsilon_n > 0$ ,  $\epsilon_n \rightarrow 0$ , then there is a sequence  $k_n < k_{n+1}$  and a sequence  $z_n$  such that (i)  $d(z_n, x_{k_n}) < \epsilon_n$ , (ii)  $\sum_{n=1}^{\infty} \lambda_n z_n \in X$ , if  $\lambda_n = 0$  or 1, (iii) if  $\lambda = \{\lambda_n\}$ ,  $\lambda_n = 0$  or 1, there is an element  $z_\lambda$  in  $X$ , such that  $\sum_{n=1}^{\infty} \lambda_n z_n \rightarrow z_\lambda$ . (Z<sub>3</sub>): Let  $\epsilon(x) \geq 0$ ,  $\epsilon(x) \rightarrow 0$  as  $x \rightarrow 0$  and assume  $x_{i_n} \rightarrow 0$  as  $n \rightarrow \infty$  for each  $i$ . Then there is a sequence  $k_n$  and a sequence  $z_n$ , satisfying (ii) and (iii) and also (i):  $d(z_n, x_{k_n}) < \epsilon(\|x_{k_n}\|)$ . In terms of these conditions, theorems concerning the continuity of additive operations from Saks spaces into Banach or Fréchet spaces are derived. Other examples of "generalized" Saks spaces are obtained by considering Banach or Fréchet-valued "measures" on an abstract space. D. Gabor (Minneapolis, Minn.)

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Source: Mathematical Reviews,

Vol. 12 No. 6

ORLICZ, W.

Alesiewicz, A., and Orlicz, W. On analytic vector-valued functions of a real variable. Studia Math. 12, 108-111 (1951).

Let  $x(t)$  be defined from a closed real interval  $[a, b]$  to a Banach space  $X$ . Then  $TCX^*$  is said to be fundamental if there exist positive constants  $\alpha, \lambda$  such that  $\sup_{t \in [a, b]} \|x(t)\| \leq \alpha \|x\|$  for all  $x \in X$ . The set  $\mathcal{F}$  is strictly fundamental if for a sequence  $\{x_n\} \subset X$   $\limsup_n \|x_n\| < \infty$  for  $x_n \in \mathcal{F}$  implies  $\limsup_n \|x_n\| < \infty$ . It is shown that if  $d^2(x(t))/dt^2$  exists and is bounded in each closed subinterval of  $[a, b]$ ,  $x(t)$  possesses a derivative in  $[a, b]$ . It is also proved that analyticity of  $x(t)$  on  $[a, b]$  for  $x \in \mathcal{F}$  implies analyticity of  $x(t)$  on  $[a, b]$ .  
R. E. Fullerton.

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Source: Mathematical Reviews,

vol 13 No. 3

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ORLICZ, W.

Alexiewicz, A., and Orlicz, W. Remarks on Riemann-  
integration of vector-valued functions. *Studia Math.* 12,  
125-132 (1951).

Let  $x(t)$  be defined as in the preceding review. The Riemann-Graves (RG) integral of  $x(t)$  over  $[a, b]$  is defined as the limit of sums  $S(\pi) = \sum x(\tau_i) |\delta_i|$ ,  $\tau_i \in \delta_i$ , over a normal sequence of partitions  $\pi = \{\delta_1, \delta_2, \dots, \delta_n\}$  of  $[a, b]$ . Various theorems are proved, chiefly by example, to illustrate the difference between the cases of a general Banach space  $X$  and the space of the reals as a range space for  $x(t)$  with regard to integrability. (RG)-integrable functions separably valued but everywhere discontinuous in  $[a, b]$  and separably

valued but everywhere weakly discontinuous in  $[a, b]$  are constructed and it is shown that neither weak integrability nor weak continuity of  $x(t)$  implies (RG)-integrability of  $x(t)$ .

R. E. Fullerton (Madison, Wis.)

Source: *Mathematical Reviews*,

Vol. 13 No. 3

1/2  
Alexiewicz, A., and Orlicz, W. Analytic operations in real Banach spaces. ~~Studia Mathematica~~ 4: (1953), 57-78. (1954).

The problem considered in this paper is that of developing a theory of real analytic functions for functions defined on one real Banach space to another. Since every real  $(B)$ -space  $X$  can be embedded in a complex  $(B)$ -space  $Z$  and since real homogeneous polynomials of degree  $n$  on  $X$  can be extended to be complex homogeneous polynomials of degree  $n$  on  $Z$ , it follows that a real analytic theory can be obtained by specializing the complex analytic theory. It can be argued, and this is the point of view of the authors, that they have used E. Hille's treatise on "Functional analysis and semi-groups" (Chap. IV) [Amer. Math. Soc. Colloq. Publ., v. 31, New York, 1948; these: Rev. 9, 594] as a model. However, in place of the vector-valued analogues of a theorem due to Hartogs which was employed so effectively by Hille, here the authors make use of the vector-valued analogues of theorems by Leja on sequences of polynomials. One finds



ALEXIEVICZ H.

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that the basic notions have lost some of their elegance in the real case. For instance, in defining what Hille calls a Gâteaux differential, the authors have been forced to assume that  $[d^n F(x+h)/dh^n]_{h=0} = n! F^{(n)}(x)$  is a homogeneous polynomial of order  $n$  whereas this is a consequence of the existence of the derivative in the complex case. The authors were reduced to proving real results from the corresponding complex results only in dealing with what Hille calls Fréchet analyticity. Finally it should be mentioned that the authors have been able in one or two instances to extend earlier results by exploiting properties of what they call "strictly fundamental sets of functionals".

R. S. Phillips.

ORLICZ, W.

Mathematical Reviews  
Vol. 14 No. 11  
Dec. 1953  
Analysis

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Alexiewicz, A., and Orlicz, W. On the differentials in Banach spaces. Ann. Soc. Polon. Math. 25 (1952), 95-99 (1953).

Let  $X$  and  $Y$  be two real Banach spaces and  $y = F(x)$  a function from  $X$  to  $Y$ . It is shown that if  $A \subset X$  is open and if  $F$  is continuous in  $A$  and if

$$\lim_{r \rightarrow 0} \frac{F(x+rh) - F(x)}{r} = \delta F(x, h)$$

exists for each  $h \in X$ ,  $x \in A$  then  $\delta F(x, h)$  is linear and continuous in  $h$  for all  $x \in A$  except for a set  $N$  of first category (i.e. is the continuous Gateaux differential of  $F$  in  $A - N$ ). An example is given of a Lipschitzian function defined from an infinite-dimensional Banach space  $X$  to itself having at all points a Gateaux differential continuous in  $x$  and  $h$  jointly but not possessing a Fréchet differential at any point of  $X$ .

R. E. Fullerton (Madison, Wis.).

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Orlicz, w.

Vuković, Vlasta. Sur la construction des méthodes de limitation, qui sont équivalentes et pas consistentes. Acad. Serbe Sci. Publ. Inst. Math. 10 (1956), 89-96. S. Mazur und W. Orlicz [Studia Math. 14 (1954), 129-160; MR 16, 814] und L. Włodarski [ibid. 14 (1954), 161-187, 188-199; MR 16, 814] gaben Beispiele permanenter Limitierungsverfahren, die nicht miteinander verträglich (consistent) sind. Der Verf. gibt daran anschließend eine allgemeine Methode zur Konstruktion derartiger Beispiele. Es wird gezeigt: Ist  $\rho_n > 0$ , so ist notwendig und hinreichend dafür, dass eine Folge  $(u_n)$  von der Form  $(r_n + c/\rho_n)$  ist mit  $(r_n)$  konvergent und  $r_n - r_{n-1} = o((\rho_n - \rho_{n-1})/\rho_{n-1})$ ,  $n \rightarrow \infty$ , jede der Bedingungen (i)  $U_n = (u_n \rho_n - u_{n-1} \rho_{n-1})/(\rho_n - \rho_{n-1})$  ist konvergent (Grenzwert  $\lim r_n$ ), (ii)  $V_n = U_n + \rho_n u_n$  ist konvergent (Grenzwert  $c + \lim r_n$ ). Ist  $\limsup \rho_n/\rho_{n-1} < 1$ , so werden durch  $U_n$  und  $V_n$  zwei Limitierungsverfahren der gewünschten Form gegeben. A. Fejérhoffer.

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C. P. G. Z. U.

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Polish contemporary mathematics

Prace Matematyczne, 2 (Mathematical Transactions, Vol. 1, Pt. 2). Warszawa, Państwowe wydawnictwo, 1955. 441 p. 1463 copies printed. Errors slip inserted.

Editorial Committee: Stanislaw Orlicz (Chief Ed.), Stefan Drobos (Deputy Chief Ed.), Adam Bielecki, Stanislaw Baran, Jan Mikusinski, Roman Sikorski, Marceli Stort, Hanna Ermanowicz, Krystof Tabakiewicz, and Wlodzislaw Sroga.

REMARKS: This book is intended for mathematicians.

COVERAGE: The book consists of a collection of articles on analysis, series, and function theory. Among the topics discussed are: the solution of Diophantine equations, set translation, power series, measure by a function, operational calculus, approximation of a function, and functional spaces. References and summaries in English and Russian are found at the end of most of the articles. No personalities are mentioned.

Baranek, H. On a Certain Elementary Power Series 264

Konowski, S. On Certain Theorems Concerning Irreducibility of Polynomials 272

Steinhaus, E. On a Certain Power Series 276

Sikorski, S. On the Determination of Measure by a Function of an Elementary Plane 283

Baranek, S. Some Properties of the Poet of a Central, Revealed by Means of the De La Pressage Perceptograph 292

Baranek, S. Almost Periodic Functions 305

Mikusinski, J. Operational Calculus in the Light of Present-Day Mathematical Trends 344

Orlicz, S. On the Errors in Approximating a Function by the First Term of its Power Series 371

Orlicz, S. On Perfectly Convergent Series in Certain Functional Spaces 393

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Orlicz, W.

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1 - F/W

Orlicz, W. On perfectly convergent series in certain spaces. *Prace Mat.* (1955), 392-414. (Polish. Russian and English summaries)

Eine Reihe  $\sum x_n$  (in einem  $B$ -Raum  $E$ ) heißt vollkommen konvergent, wenn jede Teilreihe  $\sum \eta_n x_n$  (oder  $\sum \eta_n \xi(x_n)$ ) für genügend viele  $\eta_n$  und genügend viele stetige Linearformen  $\xi$ , so ist  $\sum x_n$  vollkommen konvergent. Im Raum  $M$  der beschränkten messbaren Funktionen ist vollkommene Konvergenz (bis auf eine Nullmenge)

die Theorie der Ortnogonanten  
K. Keller (Tübingen)

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*Orlicz W*

Alexiewicz, A., and Orlicz, W. On a theorem of C. Carathéodory. Ann. Polon. Math. 1 (1955), 414-417.

For  $a \leq t \leq b$  and  $a \leq u \leq \beta$  let  $\varphi(t, u)$  be continuous in  $u$  and, for  $u$  in a set dense in  $(a, \beta)$ , measurable in  $t$ , and suppose that  $|\varphi(t, u)| \leq s(t)$  with  $s$  integrable. If  $a < \tau < b$  and  $a < \eta < \beta$ , then there exist numbers  $p$  and  $q$  such that  $p < \tau < q$  and an absolutely continuous function  $y(t)$  defined for  $p < t < q$  such that  $y(\tau) = \eta$  and  $y'(t) = \varphi(t, y(t))$  for almost all  $t$ . This slightly strengthened form of Carathéodory's theorem [Vorlesungen über reelle Funktionen, 2nd ed., Teubner, Leipzig-Berlin, 1927, p. 672] is deduced from the fact that, under the conditions here imposed, there exist continuous functions  $\varphi_n(t, u)$  such that  $|\varphi_n(t, u)| \leq s(t)$  and, for almost all  $t$  in  $[a, b]$ ,

$$\lim_{n \rightarrow \infty} \max_{a \leq u \leq \beta} |\varphi_n(t, u) - \varphi(t, u)| = 0.$$

This approximation theorem follows, in turn, from consideration of  $\varphi(t, u)$  as a vector-valued function on  $[a, b]$  into the space of functions continuous on  $[a, \beta]$ , and on a criterion for measurability of vector-valued functions given by Pettis [Duke Math. J. 5 (1939), 251-269].

P. A. Ficker (Knoxville, Tenn.)

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OR LICZ, W.

Alexiewicz, A.; and Orlicz, W. On summability of double sequences. I. Ann. Polon. Math. 2 (1955), 170-181 (1956).

The reviewer (Bull. Amer. Math. Soc. 46 (1940), 327-331; MR 1, 219) extended a consistency theorem of Banach (Théorie des opérations linéaires, Warsaw, 1932, p. 95) from single sequence summability to a certain case of double sequence summability. The authors improve this result by removing the hypothesis of reversibility. Other closely related results are given. Notational complexities prevent the giving of relevant details within the scope of a short review.

J. D. Hill

Math

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ORLICZ, W.

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Orlicz, W. Linear operations in Saks spaces. II. Studia Math. 15 (1955), 1-25.

I - F/W

[For definitions and such notations as are used in this review the reader is referred to Orlicz, Studia Math. 11 (1950), 237-272; MR 12, 418.] The study of Saks spaces finds its motivation in the renorming of the unit sphere of a Banach or Fréchet space with a norm relative to which the unit sphere is complete. Such renormings arise naturally; e.g., in the space  $X$  of bounded sequences with sup norm a new norm  $\| \{a_n\} \|_*$  defined by  $\sum_{n=1}^{\infty} 2^{-n} |a_n|$  can be introduced. So renormed the unit sphere of  $X$  becomes the Saks space  $X$ . In the present paper, the author studies sequences of linear operations  $U_n$  from  $X$  into a Banach or Fréchet space  $Y$ . Associated with the sequence  $U_n$  is  $w(x)$ , a measure of the oscillation of the sequence  $U_n$  at  $x$  and sets  $R_\sigma, S_\sigma$  where  $w(x) \geq \sigma$ , resp.  $< \sigma$ . Various special values and limits of  $\sigma$  and  $w(x)$  are related to the behavior of the sequence  $U_n$ . A collection of category theorems reminiscent of the Banach-Steinhaus "Idealkreis" is derived. Applications are given to the theory of summability of the discrete and continuous types. Details are numerous and extensive and only the barest bones of the paper can be communicated through a review.

B. R. Gelbaum (Minneapolis, Minn.)

Studia Math. 15 (1956), 201-215.

The authors prove the following theorems: (1) Let the function  $f(x, y, z, p, q)$  be continuous and bounded in  $Q_\infty$ :

$$|f(x, y, z, p, q)| \leq M,$$

and let it satisfy a Lipschitz condition

$$|f(x, y, z, p_1, q_1) - f(x, y, z, p_2, q_2)| \leq L_1(|p_1 - p_2| + |q_1 - q_2|),$$

in every set  $Q_k$ . Then there exists a function  $z(x, y)$  in  $R$  having a continuous derivative  $\partial^2 z / \partial x \partial y$  and satisfying the equation

$$\frac{\partial^2 z}{\partial x \partial y} = f\left(x, y, z, \frac{\partial z}{\partial x}, \frac{\partial z}{\partial y}\right)$$

with the initial conditions  $z(x, 0) = \alpha(x)$ ,  $z(x, y) = \gamma(y)$ . (2) Let the function  $f(x, y, z)$  defined for  $a \leq x \leq b$ ,  $0 \leq y \leq \alpha$  be: 1° bounded,  $|f(x, y, z)| \leq M$ ; 2° measurable in  $(x, y)$  for fixed  $z$  in a set dense in  $(-\infty, \infty)$ ; 3° continuous in  $z$  for fixed  $x, y$ . Then there exists a continuous function  $z(x, y)$

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satisfying the equation

$$\frac{\partial^2 z}{\partial x \partial y} = f(x, y, z)$$

almost everywhere, and such that  $z(x, \epsilon) = \sigma(x)$ ,  $z(\alpha, y) = \tau(y)$ . (3) Let  $f(x, y, z, p, q)$  satisfy the hypotheses of (1) and let  $\|f_n - f\| \rightarrow 0$ . Let  $z_n(x, y)$  be a solution in  $R$  of the equation

$$\frac{\partial^2 z}{\partial x \partial y} = f_n(x, y, z, \frac{\partial z}{\partial x}, \frac{\partial z}{\partial y})$$

with initial values  $z(x, \eta_n) = \sigma_n(x)$ ,  $z(\xi_n, y) = \tau_n(y)$ . Let the solution  $z(x, y)$  of the equation

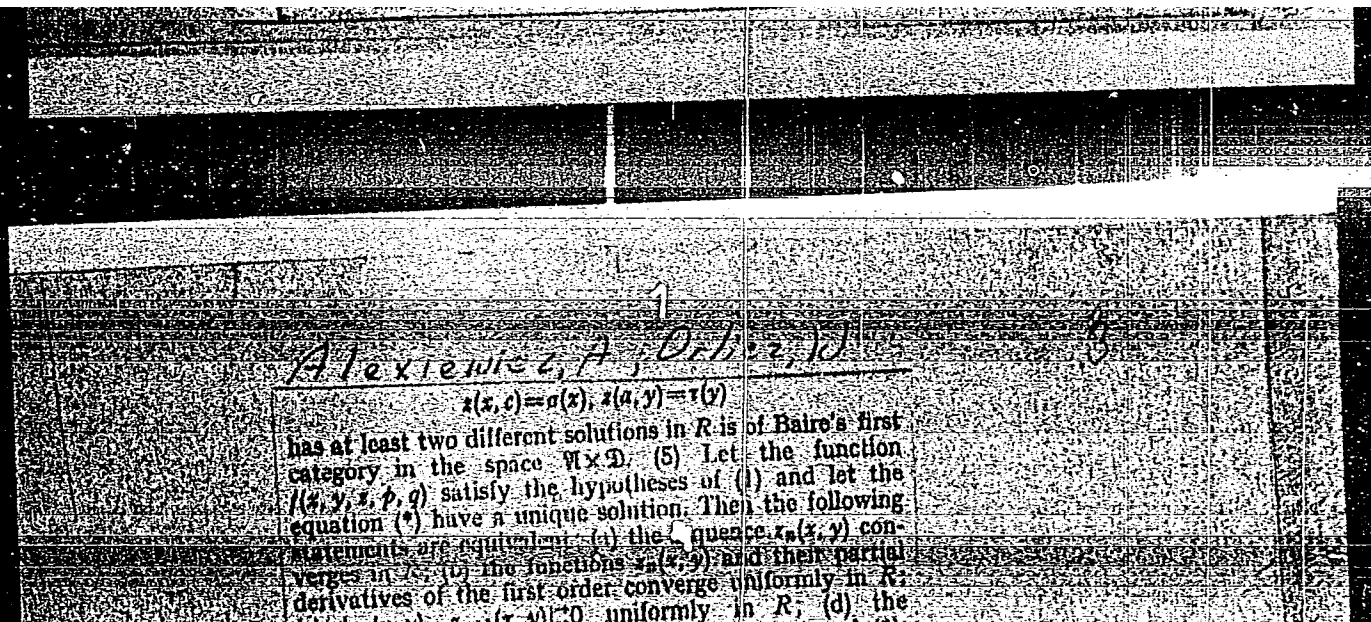
$$\frac{\partial^2 z}{\partial x \partial y} = f(x, y, z, \frac{\partial z}{\partial x}, \frac{\partial z}{\partial y})$$

with initial condition  $z(x, \eta) = \sigma(x)$ ,  $z(\xi, y) = \tau(y)$  be unique. If  $\delta_n = (\xi_n, \eta_n, \sigma_n, \tau_n) \rightarrow (\xi, \eta, \sigma, \tau)$ , then  $\|z_n - z\| \rightarrow 0$ . (4) The set  $\mathcal{S}$  of those  $(\xi, \eta, \sigma, \tau) \in \mathcal{A} \times \mathcal{D}$  for which the equation

(5)  $z(x, y) = \int_{\xi}^x \int_{\eta}^y f(u, v, z(u, v), \frac{\partial z(u, v)}{\partial u}, \frac{\partial z(u, v)}{\partial v}) du dv$

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bounded functions  $f(x, y, z, p, q)$  in  $\mathcal{C}^1$   
 conditions  

$$|f(x_1, y_1, z_1, p, q) - f(x_2, y_2, z_2, p, q)| \leq$$

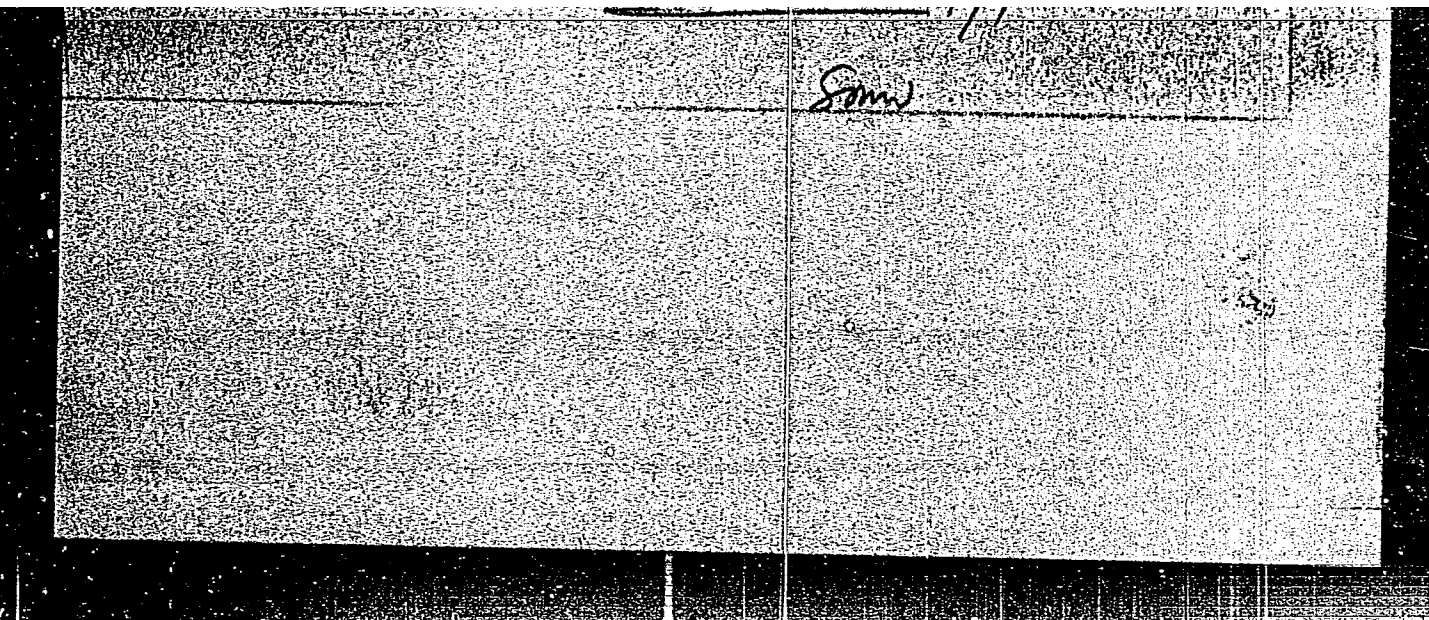
$$\omega(\max(|x_1 - x_2|, |y_1 - y_2|, |z_1 - z_2|)),$$
 where  $\omega(\delta) \rightarrow 0$  as  $\delta \rightarrow 0+$ .

3/1

Alexewicz, A. Orlicz, W

3

$|f(x, y, z, p_1, q_1) - f(x, y, z, p_2, q_2)| \leq L_2(|p_1 - p_2| + |q_1 - q_2|)$   
 for  $(x, y, z, p_1, q_1) \in Q$ ,  $(x, y, z, p_2, q_2) \in Q$ ,  $Q: a \leq x \leq b$ ,



ORLICZ, W.

Musielak, J., and Orlicz, W. Linear functionals over the space of functions continuous in an open interval. *Studia Math.* 15 (1956), 216-224.

If  $C(a, b)$  is the set of bounded continuous functions in the open interval  $(a, b)$  and if  $a < t_1 < t_2 < b$ ,  $t_1' < a$ ,  $t_2' < b$ , one can renorm the unit sphere of  $C(a, b)$  by use of the formula  $\|x\|_a = \sum_{n=0}^{\infty} 2^{-n} \|x\|_{t_n}$ , where

$$\|x\|_a = \sup \{ |x(t)| : t_n \leq t \leq t_n' \}$$

The renormed unit sphere is denoted by  $K_a(a, b)$  (a Saks space) and a functional  $\xi$  on  $K_a(a, b)$  is called linear if  $x_1, x_2, \lambda_1 x_1 + \lambda_2 x_2 \in K_a(a, b)$  implies  $\xi(\lambda_1 x_1 + \lambda_2 x_2) = \lambda_1 \xi(x_1) + \lambda_2 \xi(x_2)$ . The authors secure a representation for such functionals and a theorem concerning the convergence of sequences of such functionals. The basic tool is the Riesz representation of functionals on  $C(t', t'')$ , the set of continuous functions on the closed interval  $[t', t'']$ . The principal result reads as follows: A continuous linear functional  $\xi$  on  $K_a(a, b)$  may be written in the form  $\xi(x) = \int_a^b x(t) dy(t)$  where (a)  $\text{var } y(t) | a < t < b < \infty$ , (b)  $y$  is left continuous and (c)  $y(t_0) = 0$  for some  $t_0 \in (t', t'')$ .

B. Gelbaum (Minneapolis, Minn.)

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1. Introduction

Some research on the effects of...

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... country ... of Europe ... (MPL) ... .., ... ..



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"Some remarks on the convergence of functionals on bases"

p. 335 (Studia Mathematica, Papers issued by the Polish Academy of Sciences,  
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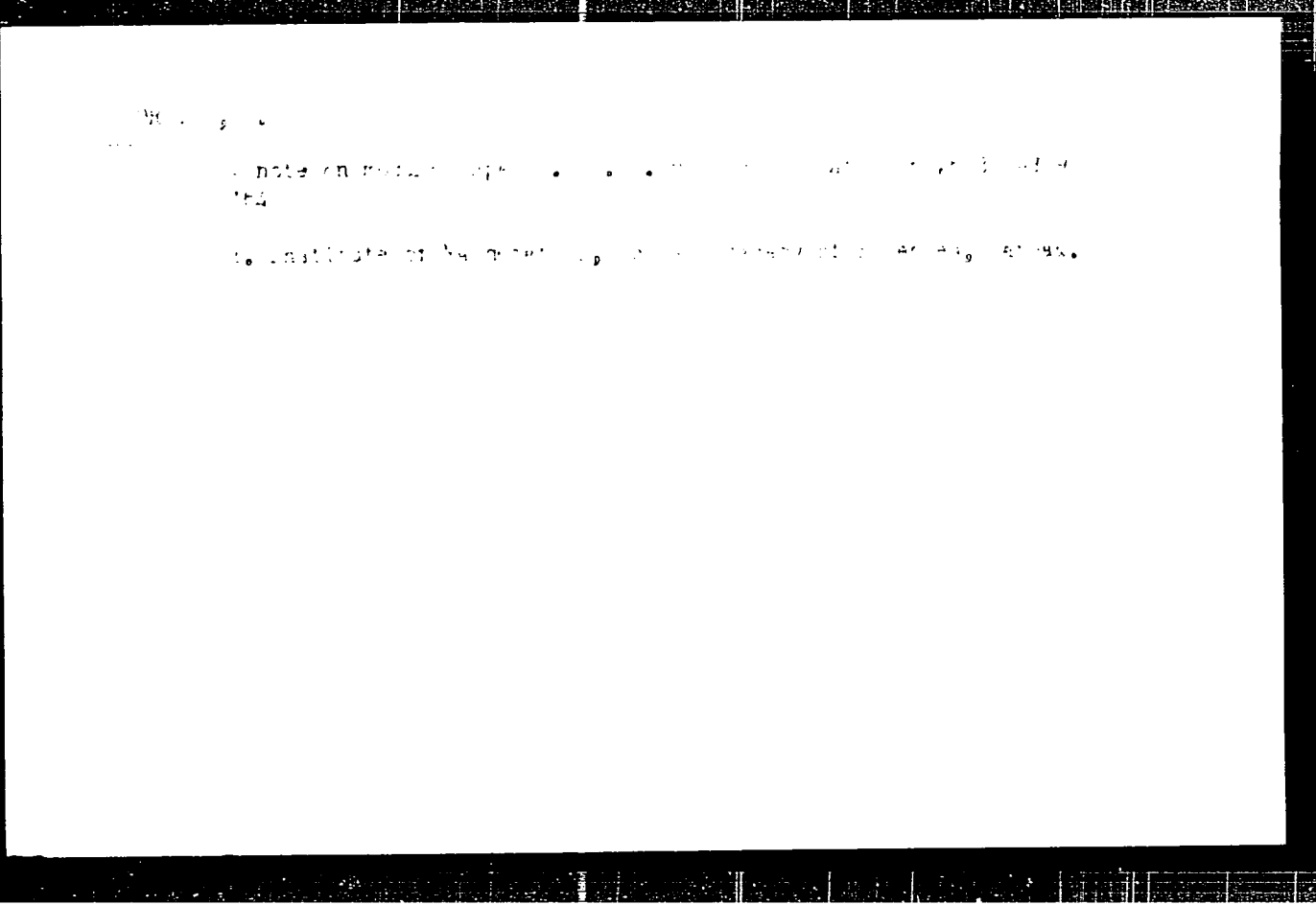
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ORLICKI, Wladyslaw

Stanislaw Kowal - Kanka polska 1910-1915

1. Member of the Polish Academy of Sciences.

Orliczowa, Jadwiga

✓ 11-226 551.574.42  
Orlicz, Michał and Orliczowa, Jadwiga. Występowanie sadzi w Tatrach. [Hoar frost deposits in the high Tatra Mountains.] *Przeegląd Meteorologiczny i Hydrologiczny*, Warsaw, 7(1/4):107-140, 1954. 11 figs., 26 tables, 21 refs. In Polish; French summary p. 139-140. **DLC, DWB**—Results of a very detailed study of hoar frost, a rather frequent phenomenon in the Tatra Mountains, carried out at the meteorological stations of Kaaprový Wierch in Poland (1928 m alt.) and Lomnick in Czechoslovakia (2635 m alt.) are presented in a number of tables, graphs and maps with explanations. Hoar frost formation often causes high tension lines to break interrupting the supply of electric current, and also results in damage to mountain forests. The paper deals with: 1) general information on the study of hoar frost in mountains; 2) number of days (actual and average) with hoar frost at each of the stations during 1941-53; 3) the quantity of hoar frost deposited, shown in *kwh/m<sup>2</sup>*; 4) hoar frost formation in relation to

ORLICZOWA Jadwiga. Subject readings: 1. Hourly studies 2. Tatra Mountains, U.S.S.R.

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ORLICZOWA Jadwiga

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72-219  
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 teorological stations of: Nowa Tatra (el. 605 m), Zakocina (835 m), Apatolowka (918 m), Kuznice  
 (1023 m) and Kasprowy Wierch (1991 m). The author considers as inversions all cases when the  
 air temperature read at a higher situated station is at least 0.1°C higher than it is at a lower station.  
 The results presented in numerous tables and graphs are explained and discussed in detail. Subject  
 Headings: 1. Baric inversions 2. Tatra Mts., Poland--A.M.P.

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CZECH CZECHOSLAVIA

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See: Monthly List of East European Accessions (ELAL) 13. Vol. 6, No. 11, October 1957. Encl.

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Hypoglycemic action of some medicinal plants. Vrach.delo no.6:  
617-621 Je '60. (MIRA 13:7)

1. Kafedra farmakologii (sav. - prof. P.V. Kovshar') Stanislav-  
skogo meditsinskogo instituta i Stanislavskiy protivozobnyy  
dispanser.

(HYPOGLYCEMIA) (BOTANY, MEDICAL)

Ch. II, 1. 4.

Book/Medicine - Histology  
Chemistry - Aniline

"The Distribution of Aniline in the Organisms," V. K. Novratskiy, I. S. Orlov,  
3 pp

"Farmakol i Toksikol" Vol. 4, p. 3

Results of a study of the distribution of aniline as representative of a large group of amino and nitro derivatives of benzene, injected into the femoral vein of dogs. It is concluded, among other points, that the aniline content in the blood at a later stage of the poisoning is an average index of the aniline content in the whole organism.

PA 14726

ORLIK, I.M., dots. (Khar'kov)

Organisation of breaks for trade school pupils during shop courses.  
Vrach.dela.no.10:1083-1085 0 '58 (MIRA 11:11)

1. Ukrainskiy institut gigiyeny truda i professional'nykh zabolevaniy.  
(SCHOOL HYGIENE)

ORLIK, I. S.

122-5-8/35

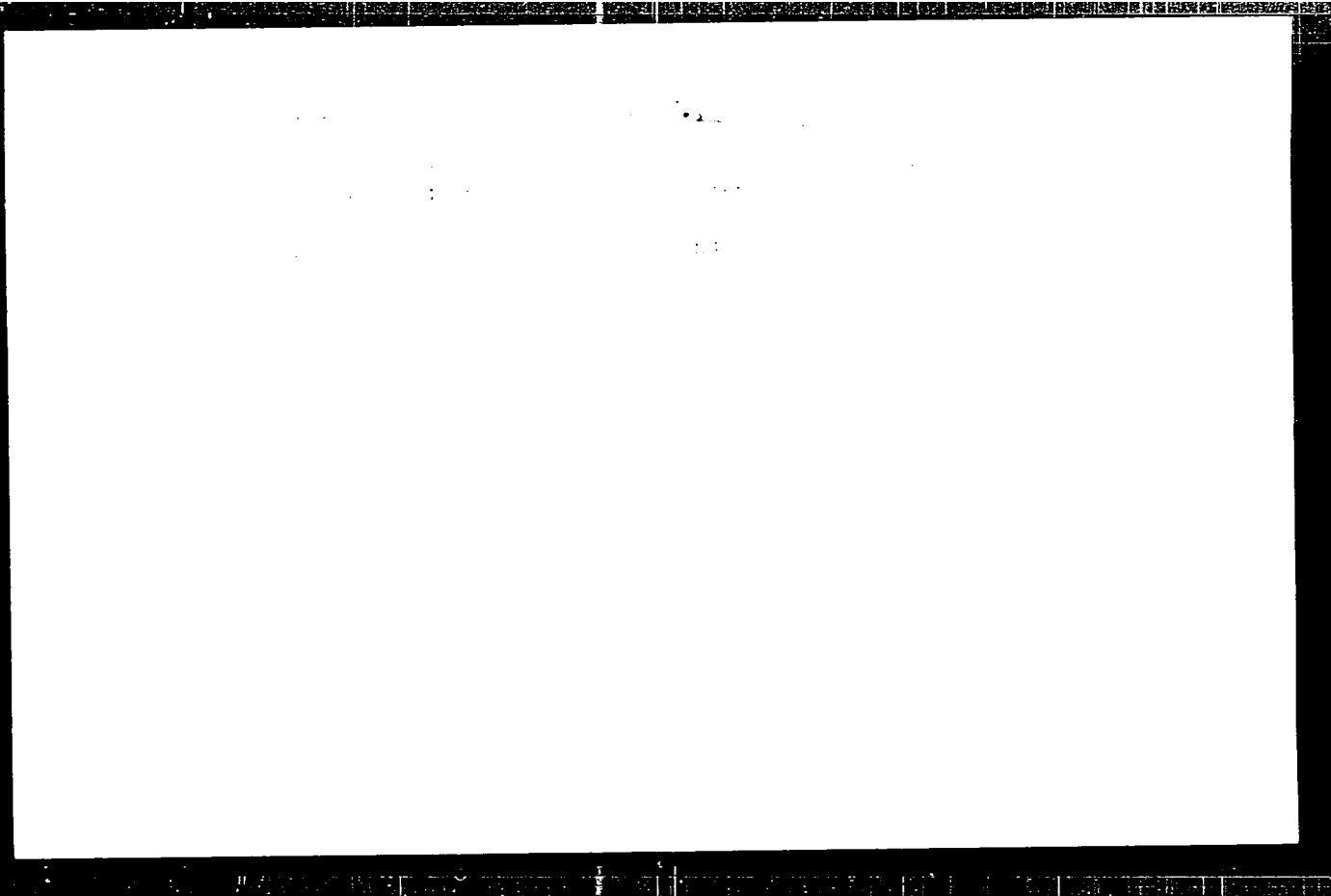
AUTHORS: Mal'tsev, V.F. (Cand. Tech. Sc., Dotsent) and Orlik, I.S.  
(Engineer).

TITLE: Tests on Infinitely Variable V-Belt Transmissions with  
Standard Belts (Ispytaniya klinoremennykh besstupenchatykh  
peredach so standartnymi remnyami)

PERIODICAL: Vestnik Mashinostroyeniya, 1957, Nr 5, pp. 19-23 (USSR)

ABSTRACT: An infinitely variable speed V-belt transmission with  
axially displaceable V-belt pulley halves is illustrated,  
which has three V-belts in parallel. A cross-sectional  
drawing shows the control mechanism which displaces the mov-  
ing parts of the two V-pulleys simultaneously at the driving  
and driven end by the rotation of two worm gears connected  
through a universally joined transmission shaft. To increase  
the range of the transmission ratio up to 5 the V-pulley  
halves must be grooved so as to mesh over part of the face  
like the teeth of a dog clutch. A transmission of this type  
is illustrated. Tests are reported designed to measure the  
load capacity of grooved V-pulleys. The driving pulley was  
mounted on the shaft of an electric motor with a trunnion  
mounted housing. The driven pulley was mounted on the shaft  
of a water brake. The torques of both the electric motor and  
the water brake were measured by resting the ends of levers

Card 1/2



HORVATH, Eva, dr.; TUSA, Adam, dr.; ORLIK, Jozsef, dr.; MONOKI, Istvan, dr.;  
WIEMER, Ferenc, dr.

Data on the dermatomyositis syndrome. Orv.hetil. 101 no.3:  
83-86 Ja '60.

1. A marosvásárhelyi II. Belgyógyászati Klinika es Borgyógyászati  
Klinika.

(DERMATOMYOSITIS diag.)

ORLIK, Miloslav, inz.

Effect of oil admixture on coking properties of coal. Hut listy 16  
no.12:839-843 D '61.

1. Koksarensky vyzkum, Vyzkumny a zkusebni ustav, Nova Hut Klementa  
Gottwalda.

(Coal) (Coke)

ORLIK, M., inz.

Coking of dry coal. Paliva 41 no.2:65-66 F '61.

1. Vyzkumny a zkusebni ustav, Nova hut Klementa Gottwalda.



ORLIK, M., inz.

Processing of green vitriol in coke chemical plants. Paliva  
41 no.6:193-196 Je '61.

1. Vyzkumny a zkusebni ustav, Nova hut Klementa Gottwalda.

STUCHLIK, V., inz.; ORLIK, M., inz.

The new in the Rumanian coking industry. Paliwa 41 no.12:380-386 D  
'61.

1. Koksarensky vyzkum, Vyzkumny a zkusebni ustav, Nova hut Klementa  
Gottwalda.

ORLIK, M., inz.

Preheating of coal charge for coking. Paliva 42 no.6:179-185  
Je '62.

1. Vyskumny a skusebni ustav, Nova hut Klementa Gottwalda.

ORLIK, M., inz.

Hearing coking batteries by hydrocarbon gases and vapors.  
Paliva 42 no.10:303-306 0 '62.

J. Vyzkumny a zkusebni ustav, Nova hut Klementa Gottwalda,  
koksarensky vyzkum.

ORLIK, M., inz.

Dry charge coking in the Hagondage coking plant. Paliva 43  
no.1:19-21 Ja '62.

1. Koksarensky vyzkum, Vyzkumny a zkusebni ustav, Nova hut  
Klementa Gottwalda.

TJUTJUNNIKOV, J.B.; VOLKOV, J.M.; ORLIK, Miroslav

Prospects of coal chemical processing. Ropa a uhlie 5 no.7:  
222 JI.'63.

1. Koksarensky vyzkum, Vyzkumny a zkusebni ustav, Nova hut  
Klementa Gottwalda (for Orlik).

ORLIK, M., inz.

Continuous benzene determination in the final stage of gas purification.  
Pavliya 43 no.2:61-62 F '63.

ORLIK, M., inz.

Laboratory electrostatic tar separator. Paliva 43 no.7:208-  
210 JI '63.

1. Koksarensky vyzkum, Vyzkumny a zkusebni ustav, Nova hut  
Klementa Gottwalda.



ORLIK, M. ins.

Experimental coking of preheated charge in France.  
Paliva 43 no. 12: 374-376 D '63.

ORLIK, M., inz.

Charge shrinking during the carbonization process in loose filling operations. Paliva 44 no.2:45-47 F164.

1. Fyzikumny a zkusebni ustav Nova hut Klementa Gottwalda, koksarensky vyzkum, Ostrava -- Kuncice.

ORLIK, M., inz.

Effect of the coal moisture on the efficiency of bulk charge converters. Patent 44 no.3:75-82 Br '64.

1. Research and Testing Institute, Nova hut Klementa Gottwaida, Coke Research Section.

ORLIK, M., inz.

Effect of moisture on the maximum permissible inclination of  
belt conveyers. Paliva 44 no.1:13-14 Ja'64.

1. Vyzkumny a zkusebni ustav, Nova hut Klementa Gottwalda,  
koksarensky vysekum.

L 39612-65	CZ/0034/64/000/008/0533/0539
ACCESSION NR: AP5020420	
AUTHOR: Orlik, Miroslav (Engineer)	4 B
TITLE: Productivity of loose charge coke oven batteries	
SOURCE: Hutnické listy, no. 8, 1964, 533-539	
TOPIC TAGS: foundry equipment, metallurgic furnace	
Abstract / Author's English summary modified 7: Various means of expressing productivity of the output of coke ovens are reviewed. It is seen that the productivity of coke ovens depends mainly on the bulk weight of the product, and on the length of the production cycle. These two factors are discussed from the point of	

data obtained in production. The work is very

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L 55612-65

ACCESSION NR: AP5020420

man is discussed, as it is considered to be very complete. Results of these authors are plotted in a graphical form, and expressed by means of equations. These are used to express the productivity

Orig. art. has: 12 formulas, 10 graphs, 2 tables.

ASSOCIATION: Koksarensky vyzkum VZU NHEG (Coke Research Section VZU NHEG)

SUBMITTED: 00 ENCL: 00 SUB CODE: IR

NR REF SOV: 003 OTHER: 040 JPRS

*HL*  
Card 2/12

I 63310-65 EWP(t)/EWP(b)	10
AUTHOR: <u>Orlik, Miroslav (Engineer); Parelka, Frantisek (Graduate mathematician)</u>	
TITLE: Relationship between the strength of coke determined by the method MICUM and Sundgreen	
SOURCE: Hutnicke listy, no. 9, 1964, 650-652	
TOPIC TAGS: coke, solid mechanical property	
Abstract: Description of both methods is given and the 2 drums used for the tests are compared. MICUM method is French, and was introduced to evaluate coke supplied by Germany for reparations after World War I. The relation is expressed as an equation	
$y = -327.6 + 15.4x_1 - 0.085x_1^2 - 0.113x_1x_2 + 3.33x_2 + 0.125x_2^2$	
where y = strength by Sundgreen method, $x_1$ = strength of coke M <sub>10</sub> and $x_2$ = attrition value of coke M <sub>10</sub> . We thank Engineer Miroslav Parelka for the presentation of 186 comparison measurements from (Czechoslovakia)	



MEASUREMENTS FROM OUR ALUMINO COKE FLIGHT. OUR THANKS ARE ALSO EXTENDED TO THE  
Card 1/2

L-63310-65

ACCESSION NR: AP9020846

workers of VUHZ Research Computation Department, who performed a series of calculations of which only some results are given here." Orig. art. has 4 graphs.

ASSOCIATION: Orlik--Koksarensky vyzkum VZU NREK (Department for Coke Research, VZU NREK); Pavelka--Vyzkum automatizace VZU NREK (Department for Automation Research VZU NREK)

SUBMITTED: 00

ENCL: 00

SUB CODE: FP, AS

NO REF BOV: 000

OTHER: 000

JPRS

steel making

fl

Card

Am  
2/2

MATIYKO, Nikolay Mikhaylovich [Matiiko, M.M.]; DOBROKHOTOV, M.M.,  
akademik, otv. red. [deceased]; ORLIK, O.L. [Orlyk, O.L.],  
red.; REKES, M.A., tekhn. red.

[Konstantin Konstantinovich Khrenov] Kostiantyn Kostian-  
tynovych Khr̄enov. Kyiv, Vyd-vo AN Ukr.RSR, 1963. 67 p.  
(MIRA 17:3)

KHRENOV, K.K., akademik, otv. red.; SHVETS', I.T., red.;  
SHCHERBAN', O.K., red.; KUCHEROV, P.S., red.; SAMSONOV,  
G.V.[Samsonov, H.V.], red.; ANISIMOV, Yu.O., kand. tekhn.  
red.; DOBROV, G.M.[Dobrov, H.M.], kand. tekhn. nauk, red.;  
MATIYKO, M.M., red.; ORLIK, O.L.[Orlyk, O.L.], red.

[Essays on the history of technology in the Ukraine] Narysy  
z istorii tekhniki na Ukraini. Kyiv, Naukova dumka, 1964.  
110 p. (MIRA 17:11)

1. Akademiya nauk UkrSR, Kiev. Sektor istorii tekhniki i  
yestestvovaniya. 2. Chlen-korrespondent AN Ukr.SSR (for  
Kucherov, Samsonov).

ORLIK, V. A.

Bacterial flora of gastric content in ulcers and cancer of the  
stomach. Sovet. med. no.10:10-11 Oct 1950. (GIML 20:1)

1. Of the Hospital Surgical Clinic (Head -- Prof. I. M. Grabchenko),  
L'vov Medical Institute (Director -- Prof. G. F. Skosogorenko),  
L'vov.