"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, V.A., kand. tekhn. nauk

Mechanizing the trenchless laying of plastic pipelines. Vod. i san. tekh. no.7:19-22 Jl '64 (MIRA 18:1)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, V. V.

Ustroistvo i soderzhanie mekhanizirovannykh gorok. [Installation and maintenance of mechanized marshalling hills]. [Redaktory S. K. Krylov, E. I. Rakito]. Moskva, Gos. transp. zhel-dor, izd-vo, 1950. 333 p. illus.
DLC: TF592.S5

SO: SOVIET TRANSPORTATION AND COMMUNICATIONS, A BIBLIOGRAPHY, Library of Congress Reference Department, Washington, 1952, Unclassified.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

N/5
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.S5

SHREYDER, V. V.

Bau und unterhaltung von mechanisierten ablaufanlagen. Hrsg. von der Lehrmittelstelle der Deutschen Reichsbahn. Leipzig, Fachbuchverlag, 1955.
320 p. illus., diagrs., tables.
Translation from the Russian: "Ustroistvo i soderzhaniye mekhanizirovannykh gorok," Moscow, 1950.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

CA

3

High frequency discharge as a light source for the spectral analysis of gases. S. R. Prish and R. Ya. Shrekler. *Izvst. Akad. Nauk S.S.S.R., Ser. Fiz.* 13, 461-72(1949).

Spectral gas analysis is made difficult because in a low pressure arc discharge the electron temp. depends on the compn. of the gas. Therefore in a mixt., gases with low activation and ionization potentials will be more strongly excited. Chem. reactions and adsorption at the walls may also take place, changing the compn. Both conditions can be improved by using a "step" excitation in tubes with capillary restriction and c.d. of several amp. × 10 sq. cm. and by employing outside electrodes and a high frequency generator with λ = 0.400 m. (the tests were made at λ = 27 m.). The discharge tubes were made of fused quartz; they had a set of capillaries of decreasing section in series. Calibration was made with mixt. of gases of known compn. and a step filter with known transmission ranges. The probable error of each reading was 2.5-5%. This method can be used in the analysis of gases showing chem. changes under gas discharge.

As an example a mixt. of N_2 and CO_2 was investigated which showed bands of N_2, CO, and CN. As analytical pairs were selected CN λ = 3880 A. and CO λ = 4124 A.; N_2 λ = 3998 A. and CO λ = 4124 A.; N_2 λ = 3998 A. and CO λ = 4392 A. The calibrations were made at 0.35 mm. pressure, 350 ma. current, a 5-mm. diam. of the capillary tube, 2-3 min. of exposure and N_2 concns. of 0.5-25%. If instead of a capillary an L-shaped tube was used and the electrodes were applied to both ends of the L, the character of the discharge coming lengthwise from the horizontal leg was different from the light coming from the central portion. A high-frequency ring discharge was also tried.

S. Pakswer

Sci Res. Physics Inst, Leningrad State U.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

YAKOVLEVNA

BOCHKOVA, Ol'ga Pavlovna; SHREYDER, Yelena Yakovlevna; FRISH, S.E., professor, redaktor; CHLOVA, L.I., redaktor; BOLCHOK, K.M., tekhnicheskiy redaktor

[Spectrum analysis of gaseous mixtures] Spektral'nyi analiz gazovykh smesei. Pod red. S.E.Frisha. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1955. 183 p. (MIRA 9:2)

1. Chlen-korrespondent AN SSSR (for Frish)
(Gases--Spectra)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, Ye. Ya.

BOCHKOVA, O.P.; SHREYDER, Ye.Ya.

Use of impulse discharges for the spectrum analysis of gas mixtures. Izv. AN SSSR. Ser. fiz. 19 no.1:75-76 Ja-F '55. (MLRA 8:9)

1. Fizicheskiy institut Lenigradskogo gosudarstvennogo universiteta imeni A.A.Zhdanova
(Spectrum analysis) (Spectrometer)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, Ye. Ya.

3539. Use of the "steeloscope" for semi-quantitative spectrographic analysis of mixtures of gases. O. P. Bochkova and E. Ya. Shreider (*Zavod. Lab.*, 1955, 21 [3], 311–312).—Contents of from 0·001 to 1 per cent. of Ne in He are determined by creating in a quartz tube containing the gases a discharge between external electrodes, and observing the relative intensities of the lines Ne 6402 A and He 6678 A with a seven-step sector.

G. S. Smith

Leningrad State U.

1

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, Ye. Ya.

Spectral analysis of gases at near-atmospheric pressures. O. P. Bochkova and E. Ya. Shreider. *Vestnik Leningrad Univ.* 11, No. 10, *Ser. Fiz. i Khim.* No. 3, 57-63(1956). The elec. spark method was developed for the detn. of gaseous mixts. At atm. pressure the concn. of inert gases in the air can be measured to as low as 0.1%. O and N in inert gases can be measured to 10^{-4}% with a high-frequency discharge at near-atm. pressures. At pressures slightly above the atm. the sensitivity of the method increased 100-fold. The mean square error was <10%. An auto-culminating spectrograph with a dispersion of 20A./mm. in the λ 4800A. region was used. The equipment and circuit are described. A. P. Kotloby

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SOV/51-6-3-2/28

AUTHOR: Shreyder, Ye. Ya.

TITLE: Measurement of Intensities in the Balmer Series and Determination of the Concentration of Excited Atoms in a Discharge (Izmereniye intensivnostey v bal'merovskoy serii i opredeleniye kontsentratsii vozbuzhdennykh atomov v razryade)

PERIODICAL: Optika i Spektroskopiya, 1959, Vol 6, Nr 3, pp 279-283 (USSR)

ABSTRACT: The discharge tube used is shown in Fig.1. Its length was 48 cm and it was divided into three symmetrical portions by the use of four electrodes (80 cm distant from the tube proper). A constant stream of electrolytic hydrogen was passed through the tube at pressures between 0.25 and 1.5 mm Hg. The discharge currents were from 70 to 250 mA. A monochromator UM-2 was used to collect light from the whole discharge tube. The line intensities were recorded by means of a photomultiplier FEU-19 and a galvanometer. The relative intensities (with $H_{\alpha} = 1000$) of the Balmer

Card 1/3

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SOV/51-6-3-2/28

Measurement of Intensities in the Balmer Series and Determination of the Concentration of Excited Atoms in a Discharge

lines H_α, H_β, H_γ and H_δ are given in Table 1 for pressures of 0.25, 0.30 and 0.35 mm Hg. These intensities are corrected for re-absorption. All the line intensities were found to increase linearly with the discharge current; dependence of the H_α intensity on the discharge current is shown in Fig.2. Dependences of the line intensities (corrected for re-absorption) on pressure are shown in Fig.3; H_α and H_β exhibit maxima while H_γ and H_δ have no maxima in the range of pressures used. From measurements of re-absorption, which was particularly great in the H_α line, the author deduced the concentration of excited hydrogen atoms at a two-quantum level (Table 2). This concentration falls with pressure (Fig.4) and rises linearly with the discharge current (Fig.5). Comparison of the measured Balmer line intensities with the values calculated assuming Boltzmann distribution of excited atoms shows that the population of higher levels is far from equilibrium. Acknowledgments are made to S.E. Frish for

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SOV/51-6-3-2/28

Measurement of Intensities in the Balmer Series and Determination of the Concentration of Excited Atoms in a Discharge

his supervision. There are 5 figures, 4 tables and 9 references, of which 2 are Soviet, 6 German and 1 English.

SUBMITTED: July 28, 1958.

Card 3/3

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

ZAYDEL', A.N., prof.; KALITEYEVSKIY, N.I.; LIPIS, L.V.; CHAYKA, M.P.; SHREYDER, Ye.Ya., red.; ZABRODINA, A.A., tekhn.red.

[Emission spectrum analysis of atomic materials] Emissionnyi spektral'nyi analiz atomnykh materialov. Pod red. A.N.Zaidelia. Leningrad, Gos.izd-vo fiziko-matem.lit-ry, 1960. 686 p. (MIRA 13:12)

(Spectrum analysis) (Nuclear reactors--Materials)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

87458

S/057/60/030/012/005/011
B019/B056

24.2120 (1482,1502,1395)

AUTHORS: Zaydel', A. N., Malyshev, G. M., Shreyder, Ye. Ya., Berezin, A. B., Belyayeva, V. A., Gladushchak, V. I., Skidan, V. V., Sokolova, L. V.

TITLE: Spectral Examinations With "Al'fa" Research Installation. I. Study of the Character of the Spectrum and of the Ion Temperature

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol. 30, No. 12, pp. 1422 - 1432

TEXT: The spectrum of the discharge was investigated within the range of 350-5000 A. The spectrum of 350-2000 A was recorded by a vacuum spectrograph (600 lines/mm), the optical axis of the instrument was laid in a radical direction. From 2000 A to 5000 A a quartz spectrograph was used. Fig.1 shows several spectra recorded by the apparatus. For determining the ion temperature, the authors used the relation

$T = 1.95 \cdot 10^{12} \mu (\Delta\lambda/\lambda)^2$ (1), on the supposition that a Maxwell velocity

Card 1/5

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

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Spectral Examinations With "Al'fa" Research Installation. I. Study of the Character of the Spectrum and of the Ion Temperature

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B019/B056

distribution and a pure Doppler broadening of the spectral lines exists. From the data concerning the temperature of the impurity ions obtained herewith it follows that, in dependence on the selection of the lines, from whose broadening the ion temperature is determined with (1), the calculated temperature varies about the range of $0.5 \cdot 10^6 - 15 \cdot 10^6$ °K. The calculated temperature value is the higher, the stronger the charge of the ion according to whose line broadening the temperature has been determined. This indicates an independent motion of the ions of different charges and a non-uniqueness of determining the plasma temperature from the Doppler broadening of the impurity atoms. The authors thank B. P. Konstantinov for discussions and N. I. Kaliteyevskiy, A. N. Razumovskiy, and M. P. Chayke for taking part in the work. There are 6 figures, 4 tables, and 7 references: 3 Soviet and 4 US.

Card 2/5

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

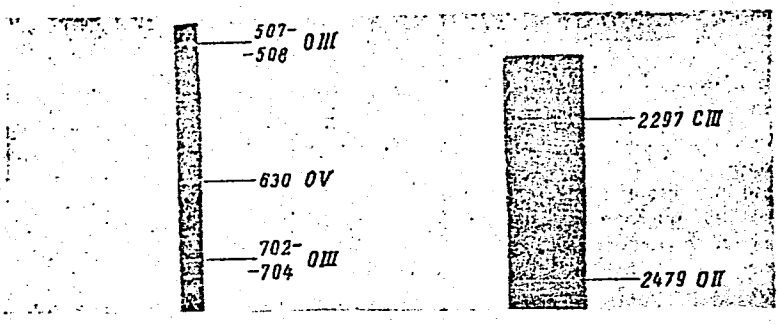
87458

Spectral Examinations With "Al'fa" Research Installation. I. Study of the Character of the Spectrum and of the Ion Temperature

S/057/60/030/012/005/011
B019/B056

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR (Institute of Physics and Technology of the AS USSR). Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury (Scientific Research Institute of Electrophysical Apparatus)

SUBMITTED: July 15, 1960



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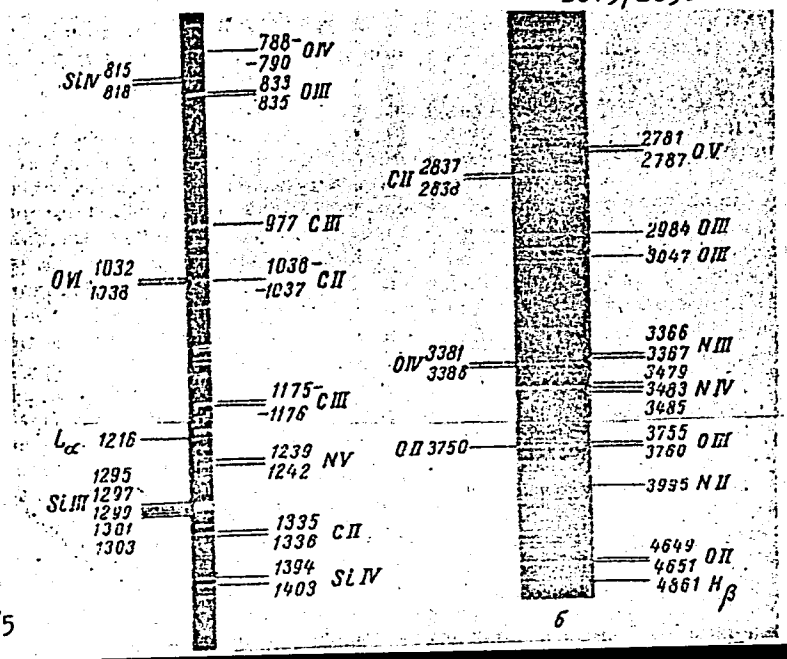

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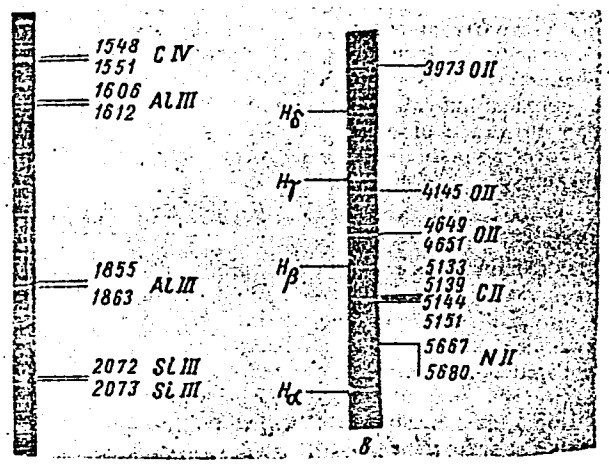
B019/B056



Legend to Fig.1: The spectrum a was recorded at U = 16 kv, H_z = 180 oe, b at U = 10 kv and H_z = 180 oe and c at U = 5 kv and H_z = 180 oe.

Fig.1

Card 5/5

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

S/057/61/031/002/001/015
B020/B056

24.2120 (1482,1502,1160)

AUTHORS: Zaydel', A. N., Malyshev, G. M., and Shreyder, Ye. Ya.

TITLE: Spectroscopic methods of studying a hot plasma

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 2, 1961, 129-166

TEXT: This is a review of articles dealing with spectroscopic studies of a hot plasma within the spectral range of some ten to 7,000 A. Plasma luminescence is characterized by the energy distribution over individual wavelengths, which, in turn, is characterized by the intensity, width, and contours of the spectral line, by the intensity of the continuous spectrum, etc. From the width of the spectral lines, the temperature of the ions, and from the shift of the spectral lines as a result of the Doppler effect, the direction of the controlled ion motion is determined. From the intensity of the spectral lines, the electron temperature in the plasma may be determined. The concentration of the charged particle is determined from the intensity of the continuous spectrum of bremsstrahlung, the contour of lines, as well as the shift of the boundary of the spectral series. On the basis of the intensity of the spectral lines of the

Card 1/11

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Spectroscopic methods of ...

impurities emitted from atoms and ions, their presence and concentration in the gas, in which the discharge occurs, may be determined. From the ratio between the line intensities, also the degree of ionization of the plasma may be determined. Fig. 1 shows the contours of the line NIV (λ = 3479 A) averaged over time and the radial direction by means of the experimental values obtained by L. V. Sokolova in the device "Al'fa". Fig. 2 was obtained on the basis of the spectrogram recorded by the spectrograph ИСП-28 (ISP-28), and Fig. 3 on the basis of the spectrogram made by means of the spectrograph ДФС-6 (DFS-6). Fig. 4 shows the optical scheme of an arrangement for measuring the velocity of controlled ion motion. The velocity of plasma ions measured by means of "Al'fa" is given in Table 1. Fig. 5 shows a diagram, from which it may be seen that the main part of light energy belongs to the wavelength range 1100-1400 A, which was used for measuring the absolute energy losses by means of thermoluminophores. For this purpose, the monochromator or spectrograph must be calibrated, two pairs of lines being selected for each element (Fig. 6). Further, the ratio between the main quantities of plasma luminescence was dealt with. The most important method of characterizing plasma

Card 2/11

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Spectroscopic methods of ... S/057/61/031/002/001/015
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luminescence with respect to time is long-time photographing. An example hereto is the spectrum shown in Fig. 7, which was taken by means of "Al'fa". Among the methods of investigating the time characteristics of line contours during the discharge pulse, the method of splitting spectral lines is mentioned. Mention is made of A. A. Vaynshteyn, I. I. Sobel'man, S. E. Frish, Yu. M. Kagan, V. I. Kogan, V. D. Kirillov, A. B. Berezin, S. Yu. Luk'yanov, and V. I. Sinitsyn. There are 14 figures, 2 tables, and 119 references: 57 Soviet-bloc and 55 non-Soviet-bloc.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Institute of Physics and Technology imeni A. F. Ioffe AS USSR, Leningrad)

SUBMITTED: September 14, 1960

Card 3/11

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

ZAYDEL', A.N.; PROKOF'YEV, V.K.; RAYSKIY, S.M.; SHREYDER, Ye.Ya.; GUROV, K.P., red.; KUZNETSOVA, Ye.B., red.; ~~BRUDNO, K.F.~~, tekhn. red.

[Tables of spectral lines]Tablitsy spektral'nykh linii. Izd.2., ispr. i dop. Moskva, Fizmatgiz, 1962. 607 p. (MIRA 16:1)
(Spectrum analysis--Tables, etc.)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

GLADUSHCHAK, V.I.; SHREYDER, Ye.Ya.

Method for measuring the color temperature of light sources using relative intensities of spectral lines. Opt. i spektr. 13 no.3:457-458 S '62. (MIRA 15:9)
(Temperature--Measurement)
(Spectrum analysis)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHA[illegible], V. I.; KANEVSKIY, Yu. P.; SHREYDER, Ye. Ya.

"Energy Measurements in the Vacuum Ultraviolet."

report submitted to 11th Intl Spectroscopy Colloq, Belgrade, 30 Sep-4 Oct 63.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

ACCESSION NR: AT4025292 S/0000/63/000/000/0042/0048

AUTHOR: Gladushchak, V. I.; Kanevskiy, Yu. P.; Shreyder, Ye. Ya.

TITLE: New method of energy calibration of vacuum spectral instruments

SOURCE: Diagnostika plazmy* (Plasma diagnostics); sb. statey. Moscow, Gosatomizdat, 1963, 42-48

TOPIC TAGS: spectrometry, spectrometer calibration, spectral line intensity, monochromator, spectrographic analysis

ABSTRACT: The graduation method proposed is suitable for the graduation of monochromators as well as spectrographs. It is pointed out that prior calibration of the spectral instrument is more practical than the use of a standard comparison source, which in the vacuum region of the spectrum would have to be a synchrotron, which in turn entails noticeable experimental difficulties. The calibration is by recording on the vacuum spectral instrument the radiation from a source in which the ratio of the spectral-line intensity can be determined from measurements in the visible region of the spectrum and from the calculated transition probabilities. The theory of such a method is described briefly and its errors are analyzed. The method was used to calibrate a normal-incidence spectrograph (SP-99, grating with

Card 1/4

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ACCESSION NR: AT4025292

2 meter radius and 1200 lines per mm, linear dispersion 4.1Å/mm). The light source was a low-voltage vacuum spark. By recording the spectrum of the vacuum spectrograph on film and comparing the calculated intensity ratios with the experimental ones it was possible to determine a coefficient characterizing the transmission of the instrument and the quantum yield of the material employed. The tests were made against 12 lines of Al III. The Al III and SiIV lines were used for the calibration, and the transition probabilities for these lines was calculated from the tables of Bates and Damgaard (Phil. Trans. Roy. Soc. v. 242, 101, 1949). The radiation of the spark was simultaneously photographed on a quartz spectrograph (ISP-28) and on the calibrated instrument, and the intensities of the spectral lines were measured. The intensity ratios of the Al III lines were calculated. From the known transition probabilities and the temperature measured with the ISP-28. Several version of the measurement technique are also described. Orig. art. has: 3 formulas and 2 tables.

ASSOCIATION: None

SUBMITTED: 19Oct63 DATE ACQ: 16Apr64 ENCL: 02

SUB CODE: GP, OP NR REF SOV: 004 OTHER: 005

Card 2/4

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

ACCESSION NR: AT4025292

ENCLOSURE: 01

	1	2	3	4
Al III	5696	$4S-4P_{3/2}$	3,4	17,8
	4701	$4F_i-5D_i$	0,80	23,4
	4529	$4P^{3}_{2}-4D_i$	16	20,5
	4150	$4D_i-5F_i$	29	23,5
	3713	$4P^{3}_{2}-5S$	4,4	21,1
	3601	$3D_i-4P_{3/2}$	5,8	17,8
	2961	$4F_i-6D_i$	0,34	24,9
	2763	$4D_i-6F_i$	16	25,0
	2213	$4P^{3}_{2}-5D_i$	1,04	23,4
	1936	$3D_i-4F_i$	170	20,8
	1855	$3S-3P_{3/2}$	21	6,6
	1612	$3P^{3}_{2}-3D_i$	91	14,4
	1384	$3P_{3/2}-4S$	17	15,6
	1353	$3D_i-5F_i$	61	23,5
	857	$3P_{3/2}-5S$	6,1	21,1
	696	$3S-4P_{3/2}$	2,0	17,8
	560	$3S-5P_i$	3,4	22,0

	1	2	3	4
Si IV	4328	$5P^{3}_{2}-6S$	4,2	37,2
	4212	$5D_i-6F_i$	23	36,0
	4116	$4S-4P^{1}_{2}$	3,1	27,0
	3762	$4D^{1}_{2}-5P_{3/2}$	9,2	34,2
	3166	$4P_{3/2}-4D_{5/2}$	32	31,0
	2287	$4D_i-5F_i$	89	36,4
	2127	$4P^{3}_{2}-5S$	12	32,8
	1727	$3D_{3/2}-4P^{1}_{2}$	10,5	27,0
	1722	$3D_{3/2}-4P_{3/2}$	21	27,0
	1394	$3S-3P_{3/2}$	35	8,[illegible]
	1128	$3P_{3/2}-3D_{5/2}$	170	19,8
	1067	$3D_i-4F_i$	540	31,4
	18	$3P_{3/2}-4S$	44	24,0
	455	$3S-4P_{3/2}$	13	27,0

Transition probabilities of Al III and Si IV

Card 3/4

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

ACCESSION NR: AT4025292

ENCLOSURE: 02

λ, Å	K	λ, Å	K
2213	100	1352	1,0
1936	67	855	0,43
1605	9,5	695	0,29
1379	1,0	560	0,005

Transmission coefficient of the instrument as a function of the wavelength

Card 4/4

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

L 11168-63 EWT(1)/BDS--AFFTC/ASD

ACCESSION NR: AP3002791 S/0051/63/014/006/0815/0816

52
51

AUTHOR: Gladushchak, V. I.; Shreyder, Ye. Ya.

TITLE: On the possibility of using calculated oscillator strengths for calibrating spectroscopic instruments

SOURCE: Optika i spektroskopiya, v. 14, no. 6, 1963, 815-816

TOPIC TAGS: oscillator strengths, vacuum spectrometers, heterochromatic photometry, spectrometer calibration

ABSTRACT: The purpose of the work was to determine the feasibility of calibrating vacuum spectrographs (for purposes of heterochromatic photometry) with the aid of calculated and tabulated f-numbers (oscillator strengths). In view of the fact that calculations of oscillator strengths are most accurate for atoms and ions with one optical electron, the test was carried out for two pairs of lines each of Be II and Al III. The measurements were carried out photographically on an ISP-28 spectrograph; the f-number ratios for comparison were determined from the tables of D. R. Bates and A. Damgaard (Phil. Trans. Roy. Soc., A242, 101, 1949). The Be II lines were excited in a hollow cathode in a stream of helium; the Al III lines were excited in a pulsed hollow cathode. The agreement of the experimental and calculated ratios shows that for purposes of calibration it is

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L 11168-63
ACCESSION NR: AP3002791

feasible to use calculated oscillator strengths for the lines of ions with one optical electron. "In conclusion, we thank A. N. Zaydel' for advice in carrying out the work." Orig. art. has: 1 formula and 1 table.

ASSOCIATION: none

SUBMITTED: 03Dec62 DATE ACQD: 15Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 003 OTHER: 003

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Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

ACCESSION NR: AP4042995 S/0051/64/017/001/0144/0146

AUTHORS: Gladushchak, V. I.; Shreyder, Ye. Ya.

TITLE: Measurements of absolute intensities in the vacuum region of the spectrum

SOURCE: Optika i spektroskopiya, v. 17, no. 1, 1964, 144-146

TOPIC TAGS: light source, spectrography, spectrum intensity, aluminum, silicon, spectrum line

ABSTRACT: Continuing earlier work (with A. N. Zaydel', ZhTF v. 31, 129, 1961), aimed at finding a light source capable of serving as a comparison standard in the vacuum region, the authors report on the suitability of a source comprising the low-voltage spark constructed by L. N. Kaporskiy and N. S. Sventitskiy (Izv. AN SSSR ser. fiz. v. 26, 857, 1962) used in conjunction with the Al III and Si IV lines, the transition probabilities of the latter being determined from the

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tables of Bates and Damgaard (Phil. Trans. Roy. Soc. London, v. 242, 101, 1949). The suitable lines for the vacuum regions were 2213, 1352, 855, 695, and 560 Å of Al III and 1727 and 455 Å of Si IV. The spark radiation was photographed simultaneously with an SP-99 vacuum spectrograph and an ISP-28 quartz spectrograph. The measurements were made for the 5696 Å line, which has a common level with the 695 Å line. The procedure is compared with that used by several authors to measure line intensities in plasma installations. "We are grateful to A. N. Zaydel' for advice during the course of the work and for a discussion of the results." Orig. art. has: 1 formula.

ASSOCIATION: None

SUBMITTED: 20Sep63 ENCL: 00

SUB CODE: OP NR REF SOV: 003 OTHER: 007

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

ACCESSION NR: AP4015323 S/0032/64/030/001/0047/0048

AUTHORS: Gladushchak, V. I.; Shreyder, Ye. Ya.

TITLE: Application of an impulsive discharge inside a hollow cathode for the analysis of gaseous mixtures

SOURCE: Zavodskaya laboratoriya, v. 30, no. 1, 1964, 47-48

TOPIC TAGS: gas discharge tube, spectral analysis, impulsive discharge, gas mixture

ABSTRACT: A more sensitive analysis of gaseous mixtures was accomplished by means of a specially designed discharge tube with a hollow cathode as shown in Fig. 1 of the Enclosure. The design permits detecting small amounts of components which are otherwise difficult to excite. Using this apparatus, 0.02% helium in air at 5 mm of Hg was detected by its 5876 Å line. Orig. art. has: 1 diagram.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk SSSR (Institute of Physics and Technology, Academy of Sciences SSSR)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

ACCESSION NR: AP4042989 S/0051/64/017/001/0129/0134

AUTHORS: Zaydel', A. N.; Maly*shev, G. M.; Shreyder, Ye. Ya.

TITLE: On the sensitivity of spectral analysis

SOURCE: Optika i spektroskopiya, v. 17, no. 1, 1964, 129-134

TOPIC TAGS: spectrum analysis, light sensitivity, photometry, photographic emulsion, photoconductive detector

ABSTRACT: The effect of the method used to record the spectrum and of the parameters of the spectral instrument on the sensitivity of a spectral analysis is investigated as a function of the character of the intensity-measurement errors. It is shown that the nature of the errors determines the requirements governing the choice of the spectral instrument and the registration time. The optimal registration time in the analysis of small amounts of substance is estimated. If a photocathode is used as the radiation receiver, the decisive analysis error can be connected either with the features of the measuring circuit or with the fluctuations of the

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measured signal, depending on the size of the noise background. In the case when an emulsion is used, the photometry area determines the type of predominating error, although the fluctuation error is decisive in the majority of cases. Regardless of the radiation receiver employed, the sensitivity of the analysis shows similar dependence on the spectral instrument parameters such as the spectral gap width, dispersion, and area of the dispersing element, so that the dependence of the sensitivity analysis on these parameters is affected primarily by the ratio of the two types of errors. The optimal registration time can be determined from the law of variation of the spectral line as the sample is consumed. Orig. art. has: 14 formulas.

ASSOCIATION: None

SUBMITTED: 26Jul63 ENCL: 00

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Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

GLADUSHCHAK, V.I.; SHRAYDER, Ye.Ya.

Measurement of absolute intensities in the vacuum region of the spectrum. Opt. i spektr. 17 no.1:144-146 Jl '64. (MIRA 17:9)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

GLADUSHCHAK, V.I.; SHREYDER, Ye.Ya.

Use of a pulsed discharge within a hollow cathode for analysis of gas mixtures. Zav. lab. 30 no.1:47-48 '64. (MIRA 17:9)

1. Fiziko-tekhnicheskiy institut AN SSSR.

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L 23826-65 EWT(1)/EWG(k)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EEC(b)-2/EWA(m)-2/Pz-6/Po-4/Pab-10/Peb/Pi-4 IJP(c) AT

ACCESSION NR: AP5000832 S/0057/64/034/012/2089/2113

AUTHOR: Shreyder, Ye.Ya.

TITLE: Intensity measurements in the vacuum region of the spectrum

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.12, 1964, 2089-2113

TOPIC TAGS: spectroscopy, ultraviolet spectrum region

ABSTRACT: The paper is essentially a review based on the literature (110 references plus 7 review papers are cited in the bibliography) of intensity measurements in the extreme (vacuum) ultraviolet. It is noted that recently developments in extreme ultraviolet intensity measurement techniques have been stimulated by the needs of astrophysical research, the interest in hot plasmas and the heightened attention to atomic and molecular photoionization phenomena. The procedures and topics mentioned and/or discussed include homochromatic photometry, heterochromatic photometry, use of radiation from thin layers as a standard, use of black-body radiation as a standard, use of synchrotrons and other secondary standards, determination of instrumental transmission spectra, measurement of absolute and relative intensities at the exit of a spectroscopic instrument, thermocouples, photoelectric

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detectors (employing UV stimulated phosphors and other materials), ionization chambers, photographic plates, and so on. There is also a brief discussion of nondispersion methods of measuring the integral extreme ultraviolet flux. The author recommends using two or more procedures for checking purposes. In the author's opinion the ultraviolet detectors having most advantages and fewest shortcomings are open type photomultipliers and ionization chambers filled with an inert gas. "In conclusion, I desire to thank A.N.Zaydel', Yu.F.Bydin, V.I.Gladshchak and G.M.Malyshev for reading the manuscript and making valuable suggestions." Orig.art.has: 13 formulas, 17 figures and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut im.A.F.Ioffe AN SSSR, Leningrad (Physicotechnical Institute AN SSSR)

SUBMITTED: 16Jul64 ENCL: 00 SUB CODE: OP

NR REF SOV: 028 OTHER: 089

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APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, Ye.Ya.

Intensity measurement in the vacuum region of the spectrum. [illegible] (AIRE 18:2)
tekh.fiz. 34 no.12:2089-2113 D '64.

1. Fiziko-tekhnicheskiy institut imeni Ioffe AN SSSR, Leningrad.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

L 9189-66 EWT(1)/T IJP(c)

ACC NR: AR6000116 SOURCE CODE: UR/0058/65/000/008/D038/D038

69
B

SOURCE: Ref. zh. Fizika, Abs. 8D318

AUTHORS: Gladushchak, V. I.; Shreyder, Ye. Ya.; Kanevskiy, Yu. P.

ORG: none

TITLE: Energy measurements in vacuum ultraviolet

CITED SOURCE: Tr. Komis. po spektroskopii. AN SSSR, M., t. 2, vyp. 1, 1964, 561-566

TOPIC TAGS: UV spectrum, spectral line, line intensity, transition probability, spectrographic camera, aluminum, silicon

TRANSLATION: A method is proposed for calibrating spectral instruments for the performance of absolute and relative measurements of intensities in the vacuum region of the spectrum. The calibration is by means of a source in which the relative and absolute intensities of the spectral lines can be determined from measurements in the visible region of the spectrum and from the calculated transition probability. The source chosen for this purpose was a low-voltage vacuum spark between siluminum electrodes. The method is applicable for the calibration of vacuum spectrographs by means of the Al-III and Si-IV lines in the wavelength interval 450--2200 A.

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26719-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6011573 SOURCE CODE: UR/0051/66/020/003/0511/0512

62
B

AUTHORS: Chashchina, G. I.; Shreyder, Ye. Ya.

ORG: none

TITLE: Determination of the oscillator strengths of the resonance lines of xenon

SOURCE: Optika i spektroskopiya, v. 20, no. 3, 1966, 511-512

TOPIC TAGS: xenon, resonance line, oscillator strength, optic transition, pressure effect, light polarization

ABSTRACT: The authors have measured the oscillator strengths of two resonant lines of xenon, at 147.0 nm ($^1S_0$ -- $^3P_1$) and 129.6 nm ($^1S_0$ -- $^1P_1$). The oscillator strengths were measured by an absorption method with a discharge tube fed from a high frequency generator at 6 Mcs (Fig. 1). To determine the absorption, three measurements were made in succession. The first and third were measurements of the line brightness without an absorbing medium in the cuvette, and the second measurement of the line brightness with the cuvette filled with a mixture of helium and xenon. The values of the oscillator strengths for 147 and 129.6 nm

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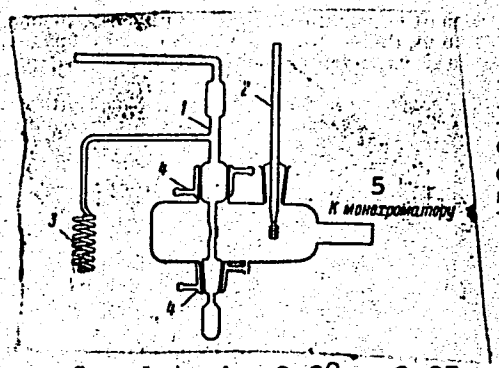

Fig. 1. Diagram of set up. 1 -- Discharge tube, 2 -- absorbing cuvette, 3 -- condensing coils, 4 -- water cooling, 5 -- to monochromator.

were found to be 0.28 ± 0.05 and 0.23 ± 0.05, which is in good agreement with published data. A linear pressure dependence was observed for the absorption coefficient at the center of the line. The possible errors in measured oscillator strengths compared to the calculated ones is estimated at not more than 25%. From the measured oscillator strengths it is possible to determine the concentration of xenon in different mixtures of inert gases and also to measure the concentration of xenon atoms in a discharge, and by the same token the degree of ionization of the xenon. The minimum absolute concentration which can be observed by such a procedure is 2×10^{-12} g, amounting to a relative concentration of $\sim 10^{-6}$%.

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A check on the sum rule for the polarizability by this method yielded a value 32.4×10^{-25} cm^3 for the polarizability in lieu of 40.4×10^{-25} cm^3 as published. This can be reconciled only by assuming that there exist other ionization lines of xenon, whose oscillator strengths make a contribution to the polarizability which is not accounted for by the present results. The authors thank A. N. Zaydel' for advice during the work. Orig. art. has: 2 figures and 1 formula.

SUB CODE: 20/ SUBM DATE: 19Jul65/ ORIG REF: 003/ OTH REF: 012

Card 3/3

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, YU. A.

Shreĭder, Yu. A. The structure of maximal ideals in rings of completely additive measures. Doklady Akad. Nauk SSSR (N.S.) 63, 359–361 (1948). (Russian)

A summary is given, with some indications of proofs, of a study [a continuation of earlier work, notably that of Gel'fand, Raĭkov and Šilov, Uspehi Matem. Nauk (N.S.) 1, no. 2(12), 48–146 (1946); these Rev. 10, 258] of the maximal ideals in the algebra A of all complex-valued countably-additive functions on the Borel subsets of the reals, multiplication being convolution. Every such ideal corresponds to a unique homomorphism of A onto the algebra of complex numbers, and every such homomorphism is stated to have the form $\varphi \to M(\varphi) = \int_{-\infty}^{\infty} m_\varphi(t)d(t)$ where $m(t)$ is a "generalized" function [whose precise character is not explained] which for each $\varphi \epsilon A$ is to be representable by a bounded φ-measurable function of t, and which satisfies the equation $m(s)m(t) = m(s+t)$ for almost all (s, t) relative to the product measure $\varphi \times \varphi$. It is stated that there exist homomorphisms M with the property that $M(\varphi) \neq M(\varphi^*)$, where $\varphi^*(E) = \varphi(-E)$ for any Borel set E, and that from this the following result of Wiener and Pitt [Duke Math. J. 4, 420–436 (1938)] is deducible: there exists an element of A whose Fourier-Stieltjes transform is bounded away from zero and such that the reciprocal of the transform is not the transform of any element of A. An m_φ with the above property is called a "generalized character," and is said to induce a decomposition of A into a direct sum of the subalgebra of ψ such that $m_\psi(t) \neq 0$ almost everywhere and the ideal of φ such that $m_\varphi = 0$; and the class of all such decompositions can be characterized by intrinsic properties.

I. E. Segal (Chicago, Ill.)

Source: Mathematical Reviews, Vol 10 No. 5

Sci. Res. Inst. Math., Moscow State U.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, YU. A.

Shreĭder, Yu. A. The structure of maximal ideals in rings of measures with convolution. Mat. Sbornik N.S. 27(69), 297–318 (1950). (Russian)

Let G be a commutative topological group satisfying the second axiom of countability, and let $\mathfrak{M}_G$ be the set of all countably additive complex-valued measures defined on the family of Borel sets in G. Let sums and complex multiples of elements of $\mathfrak{M}_G$ be defined in the usual fashion. For any two measures σ and φ in $\mathfrak{M}_G$, let the convolution $\varphi*\sigma$ be defined by the formula (1) $\varphi*\sigma(E)=\int_G\varphi(E-t)\,d\sigma(t)$, for every Borel set E in G. It is proved that the integral in (1) is well defined and that $\varphi*\sigma$ is an element of $\mathfrak{M}_G$. With the norm $\|\varphi\|$ defined as the sum of the variations of the real and imaginary parts of φ, for all $\varphi\in\mathfrak{M}_G$, $\mathfrak{M}_G$ becomes a commutative Banach algebra over the complex numbers. In the following, we identify maximal ideals of $\mathfrak{M}_G$ with homomorphisms of $\mathfrak{M}_G$ onto the complex numbers, in the standard way.

The algebra $\mathfrak{M}_R$ (R the additive group of real numbers) was described by Gel'fand [Rec. Math. [Mat. Sbornik] N.S. 9(51), 51–66 (1941); these Rev. 3, 51]; it was pointed out that the Fourier-Stieltjes transform (2) $F(t)=\int_{-\infty}^{+\infty}e^{ixt}\,d\varphi(x)$ produces a class of maximal ideals in $\mathfrak{M}_R$. More maximal ideals were identified by Gel'fand, Raĭkov, and Silov [Uspehi Matem. Nauk (N.S.) 1, no. 2(11), 48–146 (1946); these Rev. 10, 258], but the class of all maximal ideals was not identified.

In the paper under review the author supplies details of previously announced results dealing with $\mathfrak{M}_G$ [Doklady Akad. Nauk SSSR (N.S.) 63, 359–361 (1948); these Rev. 10, 309]; he also establishes a number of new results. It is first shown that the general bounded linear functional L on $\mathfrak{M}_G$ has the form (3) $L(\varphi)=\int_G f_\varphi(t)\,d\varphi(t)$, where f_φ (a generalized function, in the author's terminology) is a complex-valued function defined on $\mathfrak{M}_G\times G$ φ-measurable for every $\varphi\in\mathfrak{M}_G$ such that $\sup_\varphi[\text{ess sup}_t|f_\varphi(t)|]=\|L\|$, and such that if σ is absolutely continuous with respect to φ, then $f_\sigma(t)=f_\varphi(t)$ except for a set of $|\sigma|$-measure zero. The proof given is not complete, but the theorem is easily verified by use of the Radon-Nikodym theorem. A generalized function f_φ is called a generalized character if $f_\varphi(s+t)=f_\varphi(s)f_\varphi(t)$ for all $\varphi\in\mathfrak{M}_G$, the equality holding for all pairs (s,t) except for a set of $|\varphi|\times|\varphi|$ measure zero, and if the norm of f_φ as a linear functional is 1. The author proves that every functional (3) which is an algebra-homomorphism onto the complex numbers is produced by a generalized character; and he also states that if f_φ is a generalized character, then

Source: Mathematical Reviews, Vol. 12 No. 6

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

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the functional (3) is an algebra-homomorphism of $\mathfrak{R}_\sigma$ onto the complex numbers. However, a part of the proof is omitted which the reviewer is unable to supply.

The remainder of the paper deals with the algebra $\mathfrak{R}_R$. It is proved that maximal ideals in this algebra exist in addition to those found by Gel'fand, Raikov, and Silov [loc. cit.]. The proof given for theorem 4, essential in this construction, appears to be incorrect; the theorem, however, is true. The author next shows that $\mathfrak{R}_R$ is nonsymmetric. For $\sigma \in \mathfrak{R}_R$, let the measure $\bar{\sigma}$ be defined by the relation $\bar{\sigma}(E) = \overline{\sigma(-E)}$, for all Borel sets E. By the uniqueness theorem for Fourier-Stieltjes transforms, the only possible involution in $\mathfrak{R}_R$ making $\mathfrak{R}_R$ symmetric is $\sigma \to \bar{\sigma}$. The author constructs a measure σ and a maximal ideal M such that $M(\sigma) = 1$ and $M(\bar{\sigma}) = 0$. This measure σ is used, with some facts concerning the topology of the space of all maximal ideals in $\mathfrak{R}_R$, to establish a theorem stated by Wiener and Pitt [Duke Math. J. 4, 420–436 (1938)]. This theorem asserts the existence of a Fourier-Stieltjes transform F which is bounded away from zero in absolute value and which has the property that F^{-1} is not a Fourier-Stieltjes transform. The proof offered by Wiener and Pitt being obscure, it is of interest that the measure $\sigma - \bar{\sigma} - \epsilon_0$ has a Fourier-Stieltjes transform satisfying the conditions of Wiener and Pitt (ϵ_0 is the measure 1 concentrated at 0). The paper closes with another construction showing that the set of ordinary Fourier-Stieltjes transforms is not the boundary of the space of all maximal ideals in $\mathfrak{R}_R$.

E. Hewitt.

Source: Mathematical Reviews, Vol 12 No. 6

SREIDER, Yu. A.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, Yu. A.

Šrelder, Yu. A. On the Fourier-Stieltjes coefficients of functions of bounded variation. Doklady Akad. Nauk SSSR (N.S.) 74, 663-664 (1950). (Russian)

The note states, without proofs, a number of results about the Fourier-Stieltjes coefficients $C_n[\varphi]=\int_0^{2\pi}e^{int}d\varphi(t)$ of functions $\varphi(t)$ of bounded variation over the interval $[0, 2\pi]$. Definition 1: A sequence of numbers $a_1, a_2, \cdots$ situated on the interval $[0, 1]$ is called Weyl-distributed, if it has a distribution function $\rho(t)$ ($=\lim_{k\to\infty} n(t, k)/k$, where $n(t, k)$ is the number of terms among $a_1, \cdots, a_k$ which fall into the interval $[0, t]$, $0<t<1$; a denumerable set of t's may be disregarded), and if $\rho(t)\neq t$ for some t. Definition 2: A point set E situated on the interval $[0, 2\pi]$ is called of type W, if there exists a sequence of integers $n_1<n_2<\cdots<n_k<\cdots$ such that for every $t\in E$ the sequence of fractional parts $\{n_1t/2\pi\}, \{n_2t/2\pi\}, \cdots$ is Weyl-distributed. The main result of this note is as follows: A necessary and sufficient condition that $C_n[\varphi]\to 0$, as $n\to\infty$, is that the variation of $\varphi(t)$ over every set of type W be zero. *A. Zygmund*

Source: Mathematical Reviews, Vol. 12 No. 5

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, Yu. A.

Sreider, Yu. A. On an example of a generalized character. Mat. Sbornik N.S. 29(71), 419–426 (1951). (Russian)

The present example is a generalized character $\chi_s(t)$ [which were introduced by the author in Mat. Sbornik N.S. 27(69), 297–318 (1950); these Rev. 12, 420] such that for a certain well known singular measure σ associated with the Cantor set $\chi_s(t)$ is almost everywhere (relative to σ) equal to a certain constant γ, where $0<|\gamma|<1$. From the mutual correspondence between these generalized characters and the homomorphisms into the complex numbers of the ring of regular measures on the reals (with convolution as multiplication) the following corollary is deduced. If $\sigma(k, s)$ is the k-fold convolution of σ with itself, translated by s (k an integer, s real), then for $k \neq m$ and for arbitrary s and t, $\sigma(k, s)$ and $\sigma(m, t)$ are singular with respect to each other.

I. E. Segal (Chicago, Ill.)

Source: Mathematical Reviews, Vol 13 No. 8

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, Yu. A.

USSR/Mathematics - Computations, Approximate 11 Feb 51

"Solution of Systems of Linear Simultaneous Algebraic Equations," Yu. A. Shreyder

"Dok Ak Nauk SSSR" Vol LXXVI, No 5, pp 651-654

Indicates method for solving systems of linear algebraic eqs, which is equally suitable for any well specified syst. Considers syst of linear equations $a_{ik}x_k = b_i$ $(i = 1,2,..,n)$ in its vector form. Table shows amt of labor necessary to compute such systems according to various methods: Shreyder's; Aiken's; method of exclusion and use of inverse substitution;

184T60

USSR/Mathematics - Computations, Approximate (Contd) 11 Feb 51

Kholetskiy's; and method of orthogonal vectors. Submitted 20 Dec 50 by Acad I. G. Petrovskiy.

184T60

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, YU. A., Cand. in Phys. Math. Sci.

"The Monte Carlo Method" a paper presented at the Conference on Methods of Development of Soviet Mathematical Machine-Building and Instrument-Building, 12-17 March 1956.

Translation No. 596, 8 Oct 56

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, Yu.A.

The Monte-Carlo method and its use in digital computers. Priboro-stroenie no.7:1-5 Jl '56. (MLRA 9:8)

(Electronic calculating machines)
(Statistical decision)
(Probabilities)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, YU. A.

"On Certain Questions of Learning" (5 October 1956).

Paper presented at the Seminars on Cybernetics at Moscow University during the 1956-57 school year.

Problemy Kibernetiki, No. 1, 1958

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, YU. A.

"Programming Certain Games with Incomplete Information (Dominoes, Cards)." Coauthor with Pervin (1 March 1957).

Paper presented at the Seminars on Cybernetics at Moscow University during the 1956-57 school year.

Problemy Kibernetiki, No. 1, 1958

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

130 - 6 - 21/27

AUTHOR: Shreyder, Yu. A. (Cand. Physical-Mathematical Sciences).

TITLE: Cybernetics and metallurgy (Kibernetika i metallurgiya).

PERIODICAL: "Metallurg" (Metallurgist), 1957, No.6, pp.38-39 (USSR).

ABSTRACT: The author draws attention to the difference between mechanization and automation and indicates how computers can help automation in metallurgical industries. After outlining the principles of analog and digital computers he gives some examples of special-purpose computer applications. As well as rolling-mill applications the author considers the blast-furnace process, mentioning the failure of the scheme adopted at the "Azovstal'" works for running a blast furnace on the basis of automatic solutions of an equation proposed by V.A.Sorokin; for such complex processes a machine which accumulates operating experience and can refer any given set of conditions to its memory is required. A system of computers which would take into account and correct operational deviation from some reference state and then indicate optimal solutions would, the author concludes, enable operating costs in industry to be substantially reduced. There are 3 figures.

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SHREYDER, Yu. A.

"The Principles of Construction of So-Called "self-informing" Control Apparatus, the Basic Property of which is the Capability to find the Optimum Way of Control by Means of Accumulated Experiences in Operation."

report presented at the Conference on Automation and Computation Engineering, Moscow, 5-8 March 1957. Organized by AU Sci. Eng. and Tech. Society for Apparatus Building.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, Yu. A.

AUTHOR: ADEL'SON-VEL'SKIY, G.M., SHREYDER, Yu.A. 42-6-4/17

TITLE: Banach Mean on Groups (Banakhovo sredneye na gruppakh)

PERIODICAL: Uspekhi Matematicheskikh Nauk, 1957, Vol.12, Nr.6, pp.131-136 (USSR)

ABSTRACT: As a Banach mean on the group $\mathfrak{G}$ the authors denote the functional L which for all bounded real functions $f(g)$ is defined on $\mathfrak{G}$ and which has the following properties: $L\{\lambda f+\mu\varphi\} = \lambda L\{f\}+\mu L\{\varphi\}$; $\inf_g f(g) \leq L\{f\} \leq \sup_g f(g)$; $L\{f(g)\} = L\{f(gh)\}$, where h is an arbitrary element of $\mathfrak{G}$. Let the set E consist of $g_1, g_2, \ldots, g_k$. Let the set of all products $g_{i_1} \cdot g_{i_2} \cdot \ldots \cdot g_{i_n}$ be E^n. Let l_n denote the number of elements of E^n. Let the group $\mathfrak{G}$ satisfy the condition (A) if for arbitrary $g_1, g_2 \ldots g_k \in \mathfrak{G}$ and every $\varepsilon > 0$ there holds: $l_n = o(e^{\varepsilon n})$.

Theorem: If on $\mathfrak{G}$ there exists a Banach mean and if $\mathfrak{G}$ possesses a bounded representation in the operator ring of the Hilbert space, then $\mathfrak{G}$ has a unitary representation being equivalent to the given representation.

Theorem: On every $\mathfrak{G}$ which satisfies (A) there exists the Banach mean.

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Banach Mean on Groups

42-6-4/17

Theorem: Let $\mathfrak{G}$ satisfy (A). Let $L\{f\}$ be a linear functional in the space of finite set functions $f(g)$ with the norm

$\|f\| = \lim_{E} \sup \lim_{n\to\infty} \sup \frac{1}{n} \sum_{k=1}^{n} |f(E^k)|$. Let $J\{f\} \leq L\{f\} \leq S\{f\}$,

where for every set function $\varphi(E)$ there holds: $S\{\varphi\} = \lim_{E} \sup \lim_{n\to\infty} \sup \frac{1}{n} \sum_{k=1}^{n} \varphi(E^k)$ and $J\{\varphi\} = \lim_{E} \inf \lim_{n\to\infty} \inf \frac{1}{n} \sum_{k=1}^{n} \varphi(E^k)$.

Then $L\{f\}$ defines on $\mathfrak{G}$ the Banach mean by the relation $L\{f(g)\} = L\{f(E)\}$.

Some further theorems on the Banach mean and without proof a theorem with necessary and sufficient conditions for the existence of the Banach mean are given.

3 Soviet and 3 foreign references are quoted.

SUBMITTED: November 2, 1956

AVAILABLE: Library of Congress

Card 2/2

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, Yu A.

"The Statistical Test Method (Monte Carlo) and Its Use in Numerical Computers," a paper given at the Conference of European Statisticians Meeting on Data-Processing Electronic Machines, Geneva, 21-24 January 1957

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APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, Yu.A.

16(1) PHASE I BOOK EXPLOITATION 1110

Voprosy teorii matematicheskikh mashin; sbornik pervyy (Problems of the Theory of Mathematical Computing Machines; Collection of Articles, v. 1) Moscow, Fizmatgiz, 1958. 230 p. 10,000 copies printed.

Ed. (Title page): Bazilevskiy, Yuriy Yakovlevich; Ed. (Inside book): Shreyder, Yu.A.; Tech. Ed.: Gavrilov, S.S.

PURPOSE: This book is intended for engineers, scientific workers, and students concerned with mathematical computers and control devices.

COVERAGE: This book, Volume I, consists of 12 articles devoted to the logical structure of mathematical computers, programming problems, and computing methods. Subjects treated include theoretical methods of describing the structure of mathematical computers, principles of constructing certain specialized computers, problems of programming automation, and selection of computing methods which are convenient for computer realization. All contributions in this volume are Soviet.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

TABLE OF CONTENTS:

Foreword 5

Bazilevskiy, Yu.Ya. Problems of the Theory of Logical Time Functions 9

This article consists of the following sections: 1) Operations on one-place two-valued variables, and their properties; 2) Operations on words and their properties; 3) Generating operators and construction of a generating function; 4) Time operators and the solution of time equations; 5) Periodic functions and their characteristics; 6) Certain problems of the analysis of time functions.

Bazilevskiy, Yu.Ya. Structure of Memory Devices 38

This article consists of the following sections: 1) Operations on words; 2) Memory elements; 3) Storage blocks with coordinate addresses; 4) Storage blocks with their own addresses; 5) storage blocks with group conversion.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

Problems of the Theory (Cont.) 1110

Akushskiy, I.Ya. Certain General Problems of Programming 63

This article consists of the following sections: 1) Certain concepts and symbols; 2) Functions and operators defined on a finite set of integers; 3) Command and programming operators. Programming cycles; 4) Input operators. Structure of command operators; 5) Homogeneous computing problem; 6) Programmability conditions of the solution of a homogeneous computing problem by a homogeneous programming cycle; 7) Linear programming operators; 8) Examples of the application of programmability conditions for linear operators; 9) Programmability conditions of the solution of a homogeneous computing problem by a nonhomogeneous programming cycle; 10) Programming factors. Good programming operators; 11) Computing of start functions; 12) Programmability of the solution of the inverse problem; 13) Conditions of simultaneous solvability.

Shreyder, Yu.A. Programming and Recursive Functions 110

This article consists of the following sections: 1) Introduction; 2) Recursive program design; 3) A system of basic functions and examples of a recursive program recording; 4) Realization of recursive synthesis in computers.

Card 3/6

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

Bazilevskiy, Yu.Ya. and Shreyder, Yu.A. Methods of Evaluating the Capacity of Universal Digital Computers With Program Control 127

This article consists of the following sections: 1) Computing volume and a system of operations; 2) Time for completing transformation operations; 3) Evaluating the time for symbol selection and word formation; 4) Conclusion.

Gluzberg, E.A. Logical Possibilities of Continuously Operating Computers 135

This article consists of the following sections: 1) Introduction; 2) Types of problems solved by analogue computers; 3) Conditional transfer in analog computers; 4) Cycle organization on analog computers; 5) Solution of problems with logical conditions on analog computers.

Vitenberg, I.M. Problems of Constructing High-speed Analog Computers for the Analysis of Dynamic Systems 149

This article consists of the following sections: 1) Introduction; 2) Selection of a search method; 3) Control circuits by logical operations; 4) Problems of design of an analog computer and its elements; 5) Conclusion.

Card 4/6

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

Problems of the Theory (Cont.)

Shreyder, Yu.A. Solution of a System of Linear Algebraic Equations by the Monte Carlo Method 167

Rameyev, B.I., and Shreyder, Yu.A. Solution of the Direct Problem of Resistivity-logging Theory on Specialized Computers 172

Livskiy, V.S. Selection of an Efficient Number of Addresses for a Digital Computer 181

This article consists of the following sections: 1) Command structure; 2) Evaluation of command efficiency of various addresses; 3) Conclusions.

Akushskiy, I.Ya. Multiregister Circuits for Performing Arithmetic Operations 192

This article consists of the following sections: Ch. 1) Performing operations in binary code; 1) Division circuits; 2) Computing the expressions ac/b, abc, ab^2; 3) Combined circuits; Ch. 2) Performing operations on decimal adders; 1) Automatic derivation of the digits of a binary code and their applications to multiplication; 2) Reciprocal numbers and their application in a multiplication circuit; 3) Division circuits; 4) Complex and combined circuits.

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SHREYDER, Yu. A.

METHODS OF LOGICAL, RECURSIVE AND OPERATOR ANALYSIS AND SYNTHESIS OF AUTOMATA

Yu. Y. BAZILEVSKY, Yu. A. SHREIDER AND I. Y. AKUSHSKY
Institute for Scientific Research of
Electronic Mathematical Machines, Moscow, USSR

The paper deals with the methods of logical description of automata (computing machines), allowing to solve problems connected with the design of different automata.

The method of logical time functions allows to relate the dynamics of the automat operation with the structure logical net which realizes it. The solution of time logical equations allows to synthesize time logical circuits with feedbacks.

The method of recursive functions permits to describe the operation of the automat realizing circuit, compounded of a set of elementary subcircuits. This method allows to pass from the program description to the building up of an efficient automat ensuring the realization of this program.

The operation of the elementary subcircuits may be conveniently represented in terms of time logical functions.

The method of command operators gives the possibility of describing the program from the point of view of the dynamics of its execution in the computing machine and allows to approach the problem of setting-up an efficient program and of recording the program in terms of recursive functions.

PAPER PRESENTED AT
INTERNATIONAL CONF. ON INFORMATION PROCESSING
UNESCO HOUSE, PARIS
15 - 20 JUNE 1959

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, Yu. A.

ANALYSIS OF THE WORKING PRINCIPLES OF SOME SELF ADJUSTING SYSTEMS IN ENGINEERING AND BIOLOGY

S. N. BRAINES, A. V. NAPALKOV,
Psychiatry Research Institute, Moscow, USSR
and
Yu. A. SCHREIDER,
Electronic Mathematical Machines Research Institute
Moscow, USSR

The report deals with control processes characterized by the volume of utilized information, by the direction of the information streams and the time needed to work out the corresponding control algorithm.

Numerical characteristics of the best attainable quality of control are given, as well as an estimation of the time needed to work out the control algorithm.

The general diagram of development of conditional reflex chains is considered. Algorithms forming the basis of the working out of complex systems of reflexes under various conditions are described on the basis of experimental data. Particularly, algorithms are considered which are connected with the utilization of previously developed reflex chains. A system of subordination in the action of conditional stimuli has been detected in experimental conditions. These mechanisms enable estimation of the information coming in from the enviroment, reduce the amount of information that has to be treated and eliminates the necessity of testing it all.

Paper Presented At: INTERNATION CONF. ON INFORMATION PROCESSING
UNESCO House, Paris
15-20 June 1959

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, Yu.A.

Moscow. Vyssheye tekhnicheskoye uchilishche imeni Baumana. Kafedra matematicheskikh mashin

Vychislitel'naya tekhnika (Computer Techniques) Moscow, Mashgiz, 1959. 153 p. (Series: Moscow. Vyssheye tekhnicheskoye uchilishche. Sbornik, No. 2) 2,500 copies printed.

Ed.: B.V. Anisimov, Candidate of Technical Sciences; Tech. Eds.: B.I. Model' and A.P. Uvarova; Managing Ed. for Literature on Machine Building and Instrument Construction: N.V. Pokrovskiy, Engineer.

PURPOSE: This book may be useful to Aspirants and other students specializing in computer technology, and also to designers and engineering and technical personnel who make use of electronic computers.

School imeni Bauman) in honor of the 40th anniversary of the October Revolution. The articles contain the results of theoretical and experimental studies on the performance of various components of electronic computers. Among the topics discussed are program storage, control devices, the connection between the parameters of an algorithm and a machine, etc. The application of these components to the control of technological processes is also discussed. (Anisimov, B.V., Cand. Tech. Sci/and V.N. Golubkin, Candidate of Technical Sciences. Analysis of the Quality of Servo-Systems With Discrete Element 32

Dobrov, Ye.V., Engineer. The Effect of Block Diagram Parameters on the Performance Quality of a Tubeless Direct Current Operational Amplifier 46

Anisimov, B.V., Candidate of Technical Sciences, V.N. Golubkin, Candidate of Technical Sciences, and Yu.M. Dovzhenko, Engineer. Device for Tranforming the Form of Recording of a Program 56

Trubnikov, M.V. Candidate of Technical Sciences, and Ye.I. Nekrylov, Engineer. Certain Principles of Constructing Local Control by External Memory Devices 21

Vlasenko, V.I., Candidate of Technical Sciences, G.S. Zhdanov, Professor, A.M. Dement'yev, Engineer, and I.N. Antonova, Engineer. Method of Forming the Images of Numbers by Means of a Ferrite Matrix 64

Shreyder, Yu.A., Candidate of Physical and Mathematical Sciences. The Connection Between the Parameters of an Algorithm and of a Machine 70

Anisimov, B.V., Candidate of Technical Sciences, V.N. Golubkin, Candidate of Technical Sciences, and A.Ya. Savel'yev, Engineer. Device for the Control of Recording of Information on Magnetic Tape 75

Vasil'yev, O.P., Engineer. Analysis of Certain Relationships for an Economical Selection of the Dimensions of a Magnetic Drum 81

Anisimov, B.V., Candidate of Technical Sciences, and Yu. V. Vinogradov, Engineer. On the Problem of the Exactness of the Representation of Continuously Varying Values in a Numerical Code 86

Shreyder, Yu. A., Candidate of Physical and Mathematical Sciences. Solution of Boundary Value Problems by the Method of Polynomial Approximations 95

Markov, G.Ya., Engineer. Certain Considerations on the Preventive Control of Electronic Computers 99

N.S. Saplin, Engineer. Photoelectric Device Which Receives Printed NUMBerical Signs 108

Palashevskiy, A.M., Engineer. Analysis of Information Storage Components of Computers 121

Chetverikov, V.N., Candidate of Technical Sciences. Relay Integrating Drive With Electromagnetic Powder Clutch 130

Kalashnikov, V.A., Engineer. Certain Algorithms for the Rational Planning of Production 142

Kuznetsov, N.M., Candidate of Technical Sciences. Circuit Mechanisms for Programmed Control 148

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, Yu.A.

Continuous group spectra. Uch.zap.Mosk.un. no.186[a]:131-136 '59. (MIRA 13:6)

(Groups, Theory of)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

RAMEYEV, B.I.; SHREYDER, Yu.A. (Penza, Moskva).

Analysis and synthesis of some discrete contactless circuits [with summary in English]. Avtom. i telem. 20 no.1:70-78 Ja '59.
(Logic, Symbolic and mathematical)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

R. R. Vasil'yev, Second International Congress on Cybernetics (3 March 1958); contents of the paper were published in the second issue of Problemy kibernetiki in the "Khronika" section.

Discussion of I. A. Poletayev's book Signal (17 October 1958).

S. N. Braynes and O. Ya. Kobrinskaya, Investigation of the Physiological Mechanism of a Complex Reflex in Mice Under Labyrinth Conditions (31 October 1958).

A. M. Petrovskiy, Report on the Mission to the US (14 November 1958).

A. A. Lyapunov, and S. V. Yablonskiy, Problem of the Systematization of the Basic Concepts of Cybernetics (28 November 1958).

I. Ya. Akaznov, Conference on Automation in Railroad Transportation (12 December 1958).

Yu. A. Shreyder, Means of Developing the Structure of Computers (26 December 1958).

A. P. Yershov, Report on the Cybernetics Symposium in London (26 December 1958);

M. G. Gaaze-Rappoport, Certain Problems of the Behavior of Living Organisms (13 February 1959).

N. Ye. Kobrinskiy, Cybernetic Problematic Topics in Economics (27 February 1959).

D. I. Volovaya, The Basis of Technical Norms of Weight and Speed of River Craft With the Aid of Electronic Digital Computers (13 March 1959).

G. V. Savinov, Electrical Simulation of Certain Self-Adaptive Systems (10 April 1959; a part will be published in Problemy kibernetiki, No 4).

A. A. Lyapunov, O. S. Kulagina, and T. N. Moloshnaya, Report on the Leningrad Conference on Mathematical Linguistics (24 April 1959, cf., pp 273-278 of this book).

report presented at the Moscow University Seminar on Cybernetics during 1958-59 school year. (under direction of A. A. Lyapunov)
(reported in Problemy kibernetiki, No. 3, 1960, p. 273)

SHELYUBSKIY, YU. A.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

BUSLENKO, Nikolay Panteleymonovich; SHREYDER, Yuliy Anatol'yevich; ROZENKNOP, V.D., red.; YERMAKOVA, Yo.A., tekhn. red.

[Method for statistical tests (Monte-Carlo) and use of digital computers in its realization] Metod statisticheskikh ispytanii (Monte-Karlo) i ego realizatsiia na tsifrovykh vychislitel'nykh mashinakh. Moskva, Gos.izd-vo fiziko-matem. lit-ry, 1961. 226 p. (MIRA 15:2)
(Electronic digital computers) (Mathematical statistics)

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D222/D306

16.6800 (1327,1329,1344)

AUTHOR: Shreyder, Yu. A. (Moscow)

TITLE: Automata and the problem of dynamic programming

SOURCE: Problemy kibernetiki, no. 5, Moscow, 1961, 31-48

TEXT: The general problem of dynamic programming is examined from a new point of view in this paper. The author believes that the treatment of this subject is not quite satisfactory in R. Bellman's work because it fails to give a mathematical formulation of the general problem, the basic principle of optimality is introduced in somewhat nebulous terms, while the proof of the fundamental theorem is not quite correct. Bellman's general formulation is unsatisfactory, since he examines only specific cases where the processes involve a finite number of decision stages. The author claims that his scheme gives a general formulation, from which Bellman's results for deterministic processes can be obtained as a special case. This method also makes it possible to evaluate the field of applicability of dynamic programming, and to eliminate some inessential

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the class treated in R. Bellman's book (Ref. 1: Dynamic Programming, Princeton Univ. Press, 1957). The basic functional equation is derived from these assumptions in the form

$$f(x_0) = \max_{y_0} \left[\theta(x_0, y_0) + f(y_0(x_0))\right] \tag{6}$$

where, in contrast to Bellman's treatment, no further assumptions need be made with respect to the function $\theta(x_0, y_0)$. It is then shown that this Eq. (6) has a unique solution which can be found by the method of successive approximations. The results are generalized to cases where the problem is reduced to a system of functional equations. This concludes the treatment of discrete time processes in a state-space which contracts to a point. There are three further sections. The first presents a somewhat modified scheme for finite-stage boundary problems which gives rise to a method for solving variational problems, equivalent to the so-

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Automata and the problem ... S/582/61/000/005/002/012
D222/D306

called "progonka" (factorization) method. The second shows that discrete processes with a variable set of strategies (i.e. when the set of applicable strategies depends on the actual state of the automaton) can also be solved by the method of successive approximations. The last section discusses the application of these methods to the theory of games, namely that the value of a play can be obtained from a functional equation for games having a saddle point. Discussions which gave rise to some of the ideas in this paper are acknowledged with V. S. Karmanov, N. S. Bakhvalov, and B. T. Polyak. There are 4 references: 2 Soviet-bloc and 2 non-Soviet-bloc. The reference to the English-language publication reads as follows: R. Bellman. Dynamic Programming. Princeton, N.Y., Princeton univ. press, 1957.

SUBMITTED: November 16, 1959

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, Yu. A.

"On Dynamic Programming" (4 March 1960, see present collection, pages 31-48)

report delivered at a seminar on cybernetics, Moscow State University

So: Problemy kibernetiki, Issue 5, 1961, pp. 289-294

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, Yu. A.

"On the Prospects of Development of Logical Scheme of Machines"

presented at the All-Union Conference on Computational Mathematics and Computational Techniques, Moscow, 16-28 November 1961

So: Problemy kibernetiki, Issue 5, 1961, pp 289-294

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

BRUSLENKO, N.P.; GOLENKO, D.I.; SOBOL', I.M.; SRAGOVICH, V.G.; SHREYDER, Yu.A.; LYUSTERNIK, L.A., red.; YANPOL'SKIY, A.R., ~~red.;~~ ROZENKNOP, V.D., red.; KRYUCHKOVA, V.N., tekhn. red.

[The method of statistical tests; Monte Carlo method]Metod statisticheskikh ispytanii; metod Monte-Karlo. Pod red. IU.A. Shreidera. Moskva, Fizmatgiz, 1962. 331 p. (MIRA 15:10)
(Mathematical statistics)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

PHASE I BOOK EXPLOITATION SOV/6185

Buslenko, N. P., D. I. Golenko, I. M. Sobol', V. G. Sragovich, and Yu. A. Shreyder

Metod statisticheskikh ispytaniy; metod Monte-Karlo (Method of Statistical Testing; the Monte Carlo Method) Moscow, Fizmatgiz, 1962. 331 p. (Series: Spravochnaya matematicheskaya biblioteka) 22,000 copies printed.

Ed. (Title page): Yu. A. Shreyder; Eds. of Series: L. A. Lyusternik and A. R. Yanpol'skiy; Ed.: V. D. Rozenknop; Tech. Ed.: V. N. Kryuchkova.

PURPOSE: This book is intended for mathematicians, physicists, and engineers engaged in the solution of problems in applied mathematics. It can also be used by students and aspirants studying the Monte Carlo method. Knowledge of the basic concepts of the theory of probability is required for reading this book. Some knowledge of random events and quantities and their probability characteristics is desirable. Acquaintance with the normal law of distribution, Lyapunov's theorem,

Card 1/62

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, Yu.A.

Concepts of generalized programming. Vop. teor. mat. mash. no.2: 122-127 '62. (MIRA 15:8)
(Programming (Electronic computers))

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

POLYAK, B.T.; SHREYDER, Yu.A.

Use of Walsh polynomials in approximate calculations. Vop. teor. mat. mash. no.2:174-190 '62. (MIRA 15:8)
(Polynomials) (Approximate computation)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

BERG, A.I., glav. red.; TRAPEZNIKOV, V.A., glav. red.; BERKOVICH, D.M., zaml glav. red.; LERNER, A.Ya., doktor tekhn. nauk, prof., zam. glav. red.; AVEN, O.I., red.; AGEYKIN, D.I., red.; kand. tekhn. nauk, dots., red.; AYZERMAN, M.A., red.; VENIKOV, V.A., doktor tekhn. nauk, prof., red.; VORONOV, A.A., doktor tekhn. nauk, prof., red.; GAVRILOV, M.A., doktor tekhn. nauk, prof., red.; ZERNOV, D.V., red.; IL'IN, V.A., doktor tekhn. nauk, prof., red.; KITOV, A.I., kand. tekhn. nauk, red.; KOGAN, B.YA., doktor tekhn. nauk, red.; KOSTOUSOV, A.I., red.; [illegible] N.A., kand. fiz.-mat. nauk red.; LEVIN, G.A., prof. red.; LOZINSKIY, M.G., doktor tekhn. nauk, red.; [illegible], V.L., red.; MAKSAREV, Yu.Ye., red.; MASLOV, A.A., dots., red.; POPKOV, A.A., red.; RAKOVSKIY, M.Ye., red.; ROZENBERG, L.D., doktor tekhn. nauk, prof., red.; SOTSKOV, B.S., red.; TIMOFEYEV, P.V., red.; USHAKOV, V.B., doktor tekhn. nauk, red.; FEL'DBAUM, A.A., doktor tekhn. nauk, prof., red.; FROLOV, V.S., red.; KHARKEVICH, A.A., red.; KHRAMOY, A.V., kand. tekhn. nauk, red.; TSYPKIN, Ya.Z., doktor tekhn. nauk, prof., red.; CHELYUSTKIN, A.B., kand. tekhn. nauk, red.; SHREYDER, Yu.A., kand. fiz.-mat. nauk, dots., red.; BOCHAROVA, M.D., kand. tekhn. nauk, starshiy nauchnyy red.; DELONE, N.N., inzh., nauchnyy red.; BARANOV, V.I., nauchnyy red.; PAVLOVA, T.I., tekhn. red.

(Continued on next card)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

BERG, A.I.--- (continued). Card 2.

[Industrial electronics and automation of production processes]Avtomatizatsiia proizvodstva i promyshlennaia elektronika. Glav. red. A.I.Berg i V.A.Trapeznikov. Moskva, Gos.nauchn. izd-vo "Sovetskaia Entsiklopediia." Vol.1. A - I. 1962. 524 p. (MIRA 15:10)

1. Chlen-korrespondent Akademii nauk SSSR (for Sotskov, Kharkevich, Zernov, Timofeyev, Popkov).
(Automatic control) (Electronic control)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, Yu.A.

Translation by machine based on text coding by meaning.
NTI no.1:34-38 '63. (MIRA 16:8)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

LINSKIY, V.S.; SHREYDER, Yu. A., kand. fiz.-matem. nauk, otv-red.; ORLOVA, I.A., red.; KORKINA, A.I., tekhn. red.

[Algorithmic design of digital computer devices.] Algoritmicheskoe proektirovanie vychislitel'nykh tsifrovykh ustroistv. Moskva, Vychislitel'nyi tsentr AN SSSR, 1963. 132p. (Akademiia nauk SSSR. Vychislitel'nyi tsentr. Soobshcheniia po vychislitel'noi tekhnike, no.2). (MIRA 16:11)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, Yuliy Anatol'yevich; BAYEVA, A.P., red.; PLAKSHE, L.Yu., tekhn. red.

[What is distance?] Chto takoe rasstoianie? Moskva, Fizmatgiz, 1963. 75 p. (Polupliarnye lektsii po matematike, no.38) (MIRA 17:2)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

USPENSKIY, V.A.; SHREYDER, Yu.A.

Problems in the theory of science information. NTI no.3: 17-20 '63. (MIRA 16:11)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

SHREYDER, Yu.A.

Quantitative characteristics of semantic information.
NTI no.10:33-38 '63. (MIRA 17:1)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

VASIL'YEV, A.M., doktor tekhn. nauk, red.; SEYFER, A.L., kand. khim. nauk, red.; SHREYDER, Yu.A., kand. fiz.-mat. nauk, red.; KRITSKAYA, Z.F., red.

[Informational systems] Informatsionnye sistemy. Moskva, In-t nauchn. informatsii, 1964. 176 p. (MIRA 17:12)

1. Akademiya nauk SSSR. Institut nauchnoy informatsii.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

BERG,A.I.,glav.red.; TRAPEZNIKOV,V.A.,glav.red.; TSYPKIN, Ya.Z., doktor tekhn.nauk,prof.,red.; VORONOV,A.A., doktor tekhn.nauk,prof.,red.; SOTSKOV,B.S., doktor tekhn.nauk,red.; AGEYKIN,D.I., doktor tekhn. nauk, red.; GAVRILOV,M.A., red.; VENIKOV,V.A., doktor tekhn.nauk, prof.,red.; CHELYUSTKIN,A.B., doktor tekhn. nauk,red.; PROKOF'YEV, V.N., doktor tekhn.nauk,prof.,red.; IL'IN,V.A., doktor tekhn.nauk, prof.,red.; KITOV,A.I.,doktor tekhn.nauk,red.; KRINITSKIY, N.A., kand. fiz.-matem.nauk,red.; KOGAN,B.Ya., doktor tekhn.nauk, red.; USHAKOV,V.B., doktor tekhn.nauk,red.; LERNER,Yu.A., doktor tekhn. nauk,prof., red.; FEL'DBAUM, A.A.,prof., doktor tekhn.nauk,red.; SHREYDER,Yu.A., kand. fiz.-mat. nauk,dots.,red.; KHARKEVICH,A.A., akad., red.; TIMOFEYEV,P.V., red.; MASLOV,A.A.,dots.,red.; LEVIN, G.A., prof.,red.; LOZINSKIY,M.G., doktor tekhn.nauk,red.; NETUSHIL, A.V., doktor tekhn.nauk,prof.,red.; POPKOV,V.I.,red.; ROZENBERG, L.D.,doktor tekhn.nauk,prof.,red.; LIVSHITS,A.L.,kand.tekhn.nauk,red.

[Automation of production and industrial electronics] Avtomatizatsiia proizvodstva i promyshlennaia elektronika; entsiklopediia sovremennoi tekhniki. Moskva, Sovetskaia Entsiklopediia. Vol.3. Pogreshnost' resheniia - Teleizmeritel'naia sistema chastotnaia. 1964. 487 p. (MIRA 17:10)

1. Chlen-korrespondent AN SSSR (for Sotskov, Gavrilov, Timofeyev, Popkov).

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

BORSHCHEV, V.B.; SHREYDER, Yu.A.

Nonalgorithmic languages of programming. NTI no.12:17-21 '64. (MIRA 18:3)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

L 22529-65 EWT(d)/BXT/EED-2/EWP(1) Pg-4/Pk-4/Po-4/Pq-4 IJP(c) GG/BB

ACCESSION NR: AP5000884 S/0315/64/000/008/0038/0041

AUTHOR: Shreyder, Yu. A. B

TITLE: Properties of language projectivity

SOURCE: Nauchno-tekhnicheskaya informatsiya, no. 8, 1964, 38-31

TOPIC TAGS: machine translation, language analysis, order graph, language model, syntactic analysis 16

ABSTRACT: The syntactical structure of a sentence may be given in the form of a so-called "tree of direction" or order graph. Conditions connecting the relationship of control sequence and uniformity in such a graph are discussed, and it is pointed out that a particular case of such a condition is the case of projectivity. It is shown that in a phrase with uniform terms, a true structure may be introduced when certain inherent conditions are satisfied. Several sentences are diagrammed, and sentence tree is illustrated and discussed. Reference is made to earlier work by N. Khomskiy and M.I. Beletskiy. "The author thanks M.V. Aranov and S. Ya. Fitialov for their comments on the article." Orig. art. has: 21 diagrams.

ASSOCIATION: none

Card 1/2

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

L 22529-65

ACCESSION NR: AP5000884

SUBMITTED: 29Apr64 ENCL: 00 SUB CODE: DP

NO REF SOV: 008 OTHER: 000

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APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

OSIPOVA, M.A.; SHREYDER, Yu.A. (Moskva)

Programming on the basis of control layers and the structure of digital computers. Zhur. vych. mat. i mat. fiz. 4 no.3:525-535 My-Je '64. (MIRA 17:6)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

DZHOLOS, Ye.M.; [illegible], O.K.; RATTSEVA, I.I.; SHREYDER, Yu.A.

Algorithm for the automatic determination of semantic coordinates. (MIRA 17:10)
NII no.5:29-34 '64.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

BERG, A.I., glav. red.; TRAPEZNIKOV, V.A., glav. red.; TSYPKIN, Ya.Z., doktor tekhn. nauk, prof., red.; VORONOV A.A., prof., red.; AGEYKIN, D.I., doktor tekhn.nauk red.;GAVRILOV, M.A., red.; VENIKOV, V.A., doktor tekhn. nauk, prof., red.; SOTSKOV, B.S., red.; CHELYUSTKIN, A.B., doktor tekhn. nauk, red.; PROKOF'YEV, V.N., doktor tekhn. nauk, prof., red.; IL'IN, V.A., doktor tekhn. nauk, prof., red.; KITOV, A.I., doktor tekhn. nauk, red.; KRINITSKIY, N.A., kand. fiz.-mat. nauk, red.; KOGAN, B.Ya., doktor tekhn. nauk, red.; USHAKOV, V.B., doktor tekhn. nauk, red.; LERNER, A.Ya., doktor tekhn. nauk, prof., red.; FEL'DBAUM, A.A., doktor tekhn. nauk, prof., red.; SHREYDER, Yu.A., kand. fiz.-mat. nauk, red.; KHARKEVICH, A.A., akademik, red. [deceased]; TIMOFEYEV, P.V., red.; MASLOV, A.A., dots., red.; TRUTKO, A.F., inzh., red.; LEVIN, G.A., prof., red.; LOZINSKIY, M.G., doktor tekhn. nauk, red.; NETUSHIL, A.V., doktor tekhn. nauk, prof., red.; POPKOV, V.I., red.; ROZENBERG, L.D., doktor tekhn. nauk, prof., red.; LIFSHITS, A.L., kand. tekhn. nauk, red.; AVEN, O.I., kand. tekhn. nauk, red.; BLANN, O.M.[Blunn, O.M.], red.; BROYDA, V., inzh.,prof.,red.; BREKKL', L [Brockl,L.] inzh., knad. nauk, red.; VAYKHARDT, Kh. [Weichardt, H.], inzh., red.; BOCHAROVA,M.D., kand. tekhn. nauk, st. nauchn. red.

[Automation of production processes and industrial electronics] Avtomatizatsiia proizvodstva i promyshlennaia elektronika; entsiklopediia sovremennoi tekhniki. Moskva, Sovetskaia entsiklopediia. Vol.4. 1965. 543 p. (MIRA 18:6)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

ARAPOV, M.V.; SHREYDER, Yu.A.

Semantics and machine translating. NTI no.1:39-45 '65. (MIRA 18:6)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

L 5054-66 EWT(d)/T IJP(c)

ACCESSION NR: AP5024539 UR/0378/65/000/004/0045/0054

519.8

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B

AUTHOR: Borshchev, V. B.; Shreyder, Yu. A.

TITLE: Algorithms, programming languages, and disposition

SOURCE: Kibernetika, no. 4, 1965, 45-54

TOPIC TAGS: algorithm, algorithmic language, computer language, computer programming

ABSTRACT: The use of computers for the solution of problems makes a correct description of the methods of solutions necessary. The description of the problem and the method of solution is carried out on one of the programming languages. The present authc.s present a formal definition of a generalized algorithm concept established in conjunction with the known concepts of evaluation. The class of formal problem descriptions includes the ordinary algorithm defini-tions as well as certain nonalgorithmic descriptions. The latter contain, in addition to orders carrying out the transformation of the text according to a certain rule, authorizations for other transformations as well. Such schemes for problem description are termed dispositions. During the development of the

Card 1/2

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ACCESSION NR: AP5024539

disposition definition the authors utilize explicitly only the modality of the authorizations. The new approach is illustrated by two examples. Orig. art. has: 13 formulas, 3 figures, and 1 table.

ASSOCIATION: none

SUBMITTED: 17Feb65 ENCL: 00 SUB CODE: DP

NO REF SOV: 010 OTHER: 000

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

L 36106-66 EWT(d)/T/EWP(1) IJP(c) BB/GG

ACC NR: AP6017928 SOURCE CODE: UR/0378/66/000/002/0049/0056

AUTHOR: Shreyder, Yu. A.

ORG: none

TITLE: On variational principles in linguistics

SOURCE: Kibernetika, no. 2, 1966, 49-56

TOPIC TAGS: machine translation, mathematic analysis, linguistics

ABSTRACT: In this article, the author attempts to draw attention to the fact that variational principles do indeed arise in some problems of linguistics, and that these principles are essentially related to the corresponding problems and are not introduced from without through mathematical esthetics. In the opinion of the author, the further development of these principles, related to the introduction of quantitative characteristics which adequately represent the essential properties of natural languages, are connected to a more thorough study of the "organization" of a language. The author investigates three examples of variational principles appearing in various linguistic problems. Example 1 is due to B. V. Sukhotin (Ye. M. Dzholos, et al., "Nauchnoteknicheskaya informatsiya", vyp. 5, 1964) and it arose in the problem of decoding unknown writing. Example 2 also deals with the decoding of

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L 36106-66

ACC NR: AP6017928

historical writing, and example 3 arises in the problem of machine translation in connection with the question of the resolution of lexical homonyms. The statements of the variational problems studied are, primarily, related to the selection of a certain quantitative characteristics of language. Evidently, this may be used as a basis for an explanation of the essential properties in the organization of texts of a language. The present work aims at only a characterization of the corresponding statements of the problem and to indicate levels of their current development. Orig. art. has: 10 formulas.

SUB CODE: 05 / SUBM DATE: 29Oct65 / ORIG REF: 017 / OTH REF: 003

Card 2/2

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001550010005-4

L 58735-65 EWP(z)/EWT(m)/EWP(b)/EWA(d)/EWP(t) MJW/JD

ACCESSION NR: AR5002378 S/0271/64/000/010/A013/A013

621.398.694.4-531.7

SOURCE: Ref. zh. Avtomat., telemekh. i vychisl. tekhn. Sv. t., Abs. 10A104

AUTHOR: Shreyger, D.

TITLE: Investigation of tensometers made from Armor-D alloy and having various grid shapes

CITED SOURCE: Sb. Vysokotemperat. tenzodatchiki. M., Mashgiz, 1963, 90-103

TOPIC TAGS: tensometer, Armor D tensometer, Carma wire tensometer

TRANSLATION: Three types of tensometers made from Armor-D alloy and Carma wire are considered. Tests were conducted on metallic specimens. Optical deformation instruments were used for control. Methods of testing, results, and a test analysis at temperatures up to 538C are presented. It is found that, for Armor-D alloy, the tenso-sensitivity factor is independent of temperature up to 315C; that the temperature variation of tensometer resistance is linear up to 315C and is independent of the number of heating cycles; that the alloy does not undergo phase transformations within 24—538C. Eighteen illustrations.

SUB CODE: IE, TD Carma Alloy ENCL: 00

Card 1/1

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