

CZECH/37-59-1-17/26

A System of Apertures for the Study of Low-Angle X-ray  
Diffraction

ASSOCIATION: Ústav fyzikální chemie ČSAV, Praha  
(Institute of Physical Chemistry, Czechoslovak Ac.Sc.,  
Prague)

SUBMITTED: June 18, 1958 ✓

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5(4), 24(5)

**AUTHORS:**

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Fingerland, Antonin

SOV/20-125-4-43/74

**TITLE:**

The Calculation of Quantum-mechanical Single-electron Systems Which Comprise a Large Subsystem (Raschet odnoelektronnykh kvantomekhanicheskikh sistem, vklyuchayushchikh bol'shuyu podsystemu)

**PERIODICAL:**

Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 4, pp 841-844 (USSR)

**ABSTRACT:**

Lifshits (Ref 1), Koster and Slater (Ref 2), and Baldock (Ref 3) developed a method for the theoretical investigation of distortions in a crystal. This method was generalized by J. Koutecky and applied to the general theory of surface tensions in a crystal in the approximation of the simple method of molecular orbits and in the approximation of the self-consistent field, as well as to the theory of chemisorption. This method is suited, according to the authors' opinion also for investigations of problems connected with the theory of chemical binding; With respect to its nature it is a theoretical basis of the modified method of molecular orbit by Dewar (Ref 8). This method is based upon the following idea: The state of the

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electron is investigated (by the simple method of the molecular orbits) or of several electrons (according to the method of the self-consistent field) which is located in the field of the configuration of the atomic remainders S. This system S is assumed to be composed of individual subsystems of the atomic remainders  $D_I, D_{II}, \dots, D_R$ . At least one of these subsystems

is by far greater than the domain within which it comes into spatial contact with the other subsystems. In this case, the potential acting upon the electrons is in such subsystems of approximately the same magnitude as in the corresponding parts of the system S. This applies in the case of a sufficiently weak interaction of the large subsystem to be investigated with the remaining subsystems. The authors endeavor to find the state function in the system S in form of a linear combination of the linear orbits of the subsystems. The equations for the required development coefficients of the eigenfunctions of the electron decomposed with respect to the orbits of the subsystems may be written down in such a manner that they may be expressed by a small number of development coefficients of the Wannier-functions or of the equivalent orbits. The here

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discussed calculation method may obviously be applied to the following examples: 1) A molecule produced from two subsystems of atomic remainders. In this case the initially existing molecules are considered to be subsystems. 2) A finite crystal. Here an infinite crystal is looked upon as an initial system. 3) Chemisorption of a molecule. In this case a molecule and a finite crystal or a molecule and an infinite crystal is considered to be a subsystem. 4) Polyene. In this case an infinite chain of atoms connected with one another by double bonds serves as an initial system. The aforementioned program may be realized by means of approximation methods of the molecular orbits and of the selfconsistent field. The second part of this paper deals with calculations (step by step) of the simple method of the molecular orbits. In the third part the method of a selfconsistent field is briefly discussed. There is complete analogy between the investigation of the problem investigated in the present case within the framework of the simple method of molecular orbits and the method of the selfconsistent field. There are 1 figure and 11 references, 5 of which are Soviet.

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ASSOCIATION: Institut fizicheskoy khimii Chekhoslovatskoy Akademii nauk  
Praga, ChSR (Institute of Physical Chemistry of the  
Czechoslovakian Academy of Sciences, Prague, CSR)

PRESENTED: January 1, 1959, by A. N. Frankin, Academician

SUBMITTED: December 22, 1958

Card 4/4

KOUTECKY, M.J.; FINGERLAND, A.

Problem of the existence of localized states in the interaction  
between an atom and a crystal. Coll Cz Chem 25 no.1:1-16 Ja '60.  
(EEAI 9:12)

1. Institut für physikalische Chemie, Tschechoslowakische  
Akademie der Wissenschaften, Prag.  
(Molecular dynamics) (Crystals) (Atoms)

F I N E A L A N N U A .

7

Single-crystal diffraction pattern of germanium. R. Bubáková, I. Drahošková, and A. Elnerová (Czech. Acad. Sci., Prague). *Czechoslov. J. Phys.* 10, 289 (1960) (in English).—The single-crystal diffraction patterns from pure Ge crystals contg. below 100 dislocations/sq. cm. were studied. The reflection intensities of Cu K $\alpha$  and Mo K $\alpha$  radiations are given as a function of the angle of incidence.

A. Kremheller

FINGERLAND, A. (Pmg)

#215

— 1/2 —

1. The following information was obtained from a review of the files of the Federal Bureau of Investigation (FBI) and the Central Intelligence Agency (CIA) regarding the activities of the "Fingerland" group in the United States and Canada.

2. The "Fingerland" group is a collection of individuals who are active in the United States and Canada. They are active in the areas of political and social activities, and are active in the areas of political and social activities.

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10. The "Fingerland" group is active in the areas of political and social activities, and is active in the areas of political and social activities.

(2)



FINGERLAND, A.

50th anniversary of Prof. Mdr Rudolf Petr. Shorn. ved. prac. lek.  
fak. Karlov. univ. (Hrad Kral) 4 no.4: 389-390 '61.  
(BIOGRAPHIES)

CZECHOSLOVAKIA

A. FINGERLAND, DrSc, Head (prednosta) Department of Pathological Anatomy of Medical Faculty Charles University (Ustav patologicke anatomie lekarske fakulty KU [=Karlovy university]), and J. JINDRICHOVA, MSc, Department of Occupational Diseases of Kraj National Health Institute (Oddeleni chorob z povolani KUNZ [=Krajske Ustav Narodniho Zdravi], Hradec Kralove.

Pulmonary Asbestosis Associated with Lung Cancer."

Prague, Pracovní Lékařství, Vol 14, No 10, Dec 1962; pp 468-471.

Abstract [English summary modified]: Description of case in 60-year old man who worked in manufacture of asbestos plates for over half of his life: bronchial pliocellular carcinoma with widespread abdominal metastases superimposed upon diffuse pulmonary asbestosis. Two slides, 3 rentgenograms, photograph of necropsy specimen; 5 Czech and 4 Western references.

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*micro 2*

CZECHOSLOVAKIA

FINGERLAND, A., Prof Dr, Dr of Scien; MYDLIL, F., MD; PROCHAZKA?  
J., Prof Dr.

1. Pathological-Anatomical Medical Faculty KU (Pato-  
logickoanatomicky ustav lekarske fakulty KU),  
Hradec Kralovy (for Fingerland); 2. Surgical Clinic  
of the Medical Faculty KU (Chirurgicka klinika lekarske  
fakulty KU), Hradec Kralovy (for Prochazka); 3.  
Lung Sanatorium (Plicni lecebna), Zamberk (for Mydlil)

Prague, Rozhledy v tuberkulose, No 5, 1963, pp 299-305

"Contribution to the Problem of Differential Diagnosis of  
Pulmonary Cavities."

PROHAZKA, Jaroslav, prof. MUDr., DrSc.; BRZEK, Vladimir; ENDRYS, Jiri;  
KOSMAK, Ivan; STEINHART, Leo; JURIN, Ivan; SLEZAK, Premysl;  
FINGERLAND, Antonin, prof. MUDr., DrSc.

Experience with surgical treatment of congenital aortic stenosis.  
Sborn. ved. prac. lek. fak. Karlov. Univ. 9 no.1:85-96 '64.

I. Kardiochirurgicke stredisko a chir. klinika (prednosta: prof. MUDr. J. Prochazka, DrSc.); II. interni klinika (prednosta: prof. MUDr. V. Jurkovic); Radiologicka klinika (prednosta: prof. MUDr. J. Bastecky, DrSc.) a Patologicko-anatomicky ustav (prednosta: prof. MUDr. A. Fingerland, DrSc.) Karlovy University v Hradce Kralove.

CZECHOSLOVAKIA

UDC 616.24-006.6:616.24-003.65

NAVRATIL, Miroslav; STEJSKAL, Josef; FINGERLAND, Antonin; Institute of Work Hygiene and Professional Diseases (Ustav Hyg. Prace a Chor. z Povolani), Prague, Director (Reditel) Prof Dr J. TEISINGER; 1st Pathological and Anatomical Institute, Fac. Gen. Med. Charles Univ. (I. Patologickoanatomicky Ustav Fak. Vseob. Lek. KU), Prague, Head (Prednosta) Prof Dr B. BEDNAR; Pathological and Anatomical Inst. Med. Fac. Charles University (Patologickoanatomicky Ustav Lek. Fak. KU), Hradec Kralove, Head (Prednosta) Prof Dr A. FINGERLAND.

"Occurrence of Lung Cancer in Asbestosis."

Prague, Pracovni Lekarstvi, Vol 18, No 6 - 7; Aug 66, pp 256-260

Abstract [Authors' English summary modified]: In the last 9 years 57 cases of asbestosis were reported in Czechoslovakia. Reports on the state of health of 35 of these were available; of the 35, 9 patients died within the last year, 7 of them of lung cancer.

Pleural and peritoneal mesothelioma was not found. The occurrence of lung cancer in asbestosis is very high. Workers who were exposed to asbestos dust should be kept under observation, even after they stopped working in dangerous surroundings and do not suffer from asbestosis. 11 Figures, 3 Tables, 4 Western, 11 Czech references. (Ms. rec. 20 Dec 65 ).

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FINGERLAND, A.; VOTTEL, V.

Causes of child mortality according to data of the pathologic and anatomic branch of the medical faculty of Charles University in Hradci Kralove in 1949. Cas.lek.cesk. 90 no.9:274-278 2 Mar 1951.  
(CJML 20:7)

FINGERLAND, A  
(# 2598)

Path. anat. ustav. a psychiat. klin. lek. fak. v Hradci Kralove. Inklusni encefalitis  
Inclusion encephalitis Cas. Lek. ces. 1951, 90/42 (1229-1232) Illus. 8  
One case of chronic inclusion encephalitis, a disorder described first by Dawson  
in 1933, is reported. Progressive mental deterioration in a 15-year-old patient  
with variable neurological signs led in 6 months to death. Grossly no changes  
were found. Microscopically there were signs of chronic diffuse encephalitis in-  
volving the whole brain with exception of cerebellum. No changes in the spinal  
cord were found. In some nerve cells intranuclear inclusion bodies, similar to them  
in herpes simplex, were demonstrated. In some nerve cells intraplasmatic, non-  
specific inclusion, as described by Dawson, were noted. Animal inoculations  
were not made. This chronic inclusion encephalitis may be due to a virus. A chronic  
form of herpetic encephalitis is not to be excluded.

Fingerland - Hradec Kralove (V, 8)

SO: EXCERPTA MEDICA Vol. 5 No. 7 Sec. VIII July 1952

FINGERLAND, Ant., Prof. MUDr; VORTEL, Vl., MUDr; ENDRYS, J., MUDr

Esophagitis herpetica. Cas. lek. cesk. 91 no. 16: 473-475 18 Apr 52.

1. Z pathologicko-anatomickeho ustavu lekarske fakulty v Hradci  
Kral. Prednosta: MUDr Ant. Fingerland.

(ESOPHAGUS, diseases,  
esophagitis ulcerative, pathol.)



FINGERLAND, A., Prof.; VOTEL, V., dr.; PIETROVSKI, E., dr.;  
HANOUSEK, J., dr.

Embolism of the amniotic fluid. Cesk. gyn. 19 no.5:327-333  
Oct 54.

(AMNIOTIC FLUID  
embolism, pulm. in labor)  
(LABOR, complications  
embolism, pulm., amniotic fluid)  
(PULMONARY EMBOLISM AND THROMBOSIS  
amniotic fluid embolism in labor)

FINGERLAND, A., prof. MUDr; VORTEL, Vl., MUDr; DVORAK, J., MUDr;  
ZDRAHAL, L., MUDr

Generalized cryptococcosis (torulosis). Cas. lek. cesk. 93 no.30:  
809-816 23 July 54.

1. Z kateder pathologicke anatomie, mikrobiologie a neurologie  
Vojenske lekarske akademie v Hradci Kralove.

(CRYPTOCOCCOSIS,  
clin. aspects)

FINGERLAND, Ant., Prof.; VORTEL, Vl., doc., Hradec Kralove

Diabetes mellitus; pathological anatomy. Cesk. gastroenter.  
9 no.3:161-169 Sept 55.

(DIABETES MELLITUS, pathology.)

VORTEL, Vlad., Doc., Dr.; FINGERLAND, A., prof., Dr.

Perinatal mortality causes; statistical report from the  
Anatomopathological Department, Hradec Kralove Military  
Medical School, 1949-53. Cesk. pediat. 11 no.11:867-874  
Nov 56.

(INFANT MORTALITY  
perinatal, causes, statist. (Cs))

FINGERLAND A. VLA.  
EXCERPTA MEDICA Sec. 5. Vol. 10/2 Gen. Pathology Feb 57

351. FINGERLAND A. VLA, Hradec Králové. \*Zjištění nedomykavosti chlopní při běžné pitvě. Determination of valvular insufficiency in routine autopsies ČAS. LÉK. ČES. 1956, 95/25-26 (696-699) illus. 3  
In 250 autopsies a simple method for the determination of valvular insufficiency was tested. The left ventricle is filled with saline under a pressure of 100-120 cm. of water (through the aorta), the right ventricle under a pressure of 30-40 cm. and the closure of mitral and tricuspid valves is observed. Defects of the intra-ventricular septum were easily demonstrated as well. This method was reliable in normal and thickened valves of the left heart, but unreliable in the tricuspid valve and in the normal mitral valve when autolysis is too advanced.  
Dvořáček - Olomouc

EXCERPTA MEDICA Sec 5 Vol. 10/6-Pathology June 57

1732. FINGERLAND A. Pathol.-Anat. Inst., Hradec Králové (Tschechoslowakei).  
\*Zur Morphologie und Pathogenese der geschichteten Lungentuberkulome.  
Morphology and pathogenesis of stratified tuberculoma  
of the lung VIRCHOWS ARCH. PATH. ANAT. 1956, 329/4 (521-532)  
Illus. 9

Tuberculomas are fundamentally related to the bronchi, which in this case usually present a tuberculous inflammation. In the 60 cases studied, M. tuberculosis was detected 41 times. The bacilli were always found in the centre or in the blocked bronchial rest. The fact that they are found in the micro-aerophile centre, that is, in the place where the bronchus has been is so characteristic that a fundamental significance should be attached to it with reference to the development of tuberculomas. This central colony of bacilli is a nucleus round which the tuberculoma grows in layers. These layers are the manifestation of the change in activity. The tuberculoma grows at the periphery, not through the direct action of the bacilli, but owing to a humoral reaction of probably antigen-antibody type.

Van Dongen-Torman - Appelscha (V, 15\*)

FINGERLAND

MYCOBACTERIOLOGY/Microbiology - Microorganisms Pathogenic to Humans and Animals.

F-5

Abstr Jour : Ref Zhur - Biol., No 5, 1958, 19575

Author : Fingerland

Inst :

Title : Histoplasmosis.

Orig Pub : Rozhl. tuberk. a nemocech. plicnich. 1957, 17, No 7, 554-557

Abstract : No abstract.

Card 1/1

USCOMM-DC-55, 211

FINGERLAND, Antonin, prof., doktor med.; VORTEL', Vladimir, dotsent, doktor med.

Some staphylococcal infections caused by strains of microbes resistant to antibiotics which arise in a surgical wards. Vest. khir. 83 no.7:21-30 J1 '59. (MIRA 12:11)

1. Iz kafedry patologicheskoy anatomii Voyenno-meditsinskoy akademii v Gradtse Kralove (Chekhoslovatskaya Respublika). (STAPHYLOCOCCAL INFECTIONS)



CZECHOSLOVAKIA

FINGERLAND, A.

Prague, Rozhledy v tuberkulose, No 3, 1963, pp 145-146

"The Pathology of Smoking and Pneumology."

FINGERLAND, A.

To the 50th anniversary of professor Vladimir Vortel, DrSc.  
Sborn. ved. prac. lek. fak. Karlov. Univ. 8 no.4:407-418  
' 65.

FINGERLAND, Antonin, prof. MUDr., DrSc.

On the bronchogenic genesis of stratified tuberculomas.  
Sborn. ved. prac. lek. fak. Karlov Univ. 8 no. 4:419-426  
' 65.

FINGERLAND, Antonin; KOPECNY, Jaroslav

Lung cancer in women. Sborn. ved. prac. lek. fak. Karlov.  
Univ. 8 no.4:495-499 ' 65.

1. Patologicko-anatomicky ustav (prednosta: prof. MUDr.  
A. Fingerland, DrSc.), Karlovy University v Hradci Kralove.

VORTEL, V.; PIACHY, V.; FINGERLAND, A.

Hepatitis in infants after transfusion of pooled plasma.  
Cesk. pediat. 20 no.10:879-882 O '65.

1. Patologickoanatomicky ustav (prednosta prof. dr. A.  
Fingerland, DrSc.) a detska klinika (prednosta prof. dr.  
J. Blecha, DrSc.) lekarske fakulty Karlovy University  
v Hradci Kralove.

KRAUS, Z.; VORTEL, V.; FINGERLAND, A.; SALAVEC, M.; KRCH, V.

Uncommon skin manifestations in Wegener's granulomatosis.  
Cesk. dermat. 40 no.6:378-382 D '65.

1. Registracni stredisko histologie koznich nemoci pri  
patologickoanatomickem ustavu (prednosta prof. dr. A.  
Fingerland), kozni klinika (prednosta prof. dr. B. Janousek)  
a I. interni klinika (prednosta prof. dr. F. Cernik) lekarske  
fakulty Karlovy University v Hradci Kralove.

SKRIVANEK, Ota; SALAVEC, Miloslav; PRIBORSKY, Jaromir; FINGERLAND, Antonin; KRCH, Vaclav.

Roentgen picture of the lungs in Wegener's granulomatosis.  
Sborn. ved. prac. lek. fak. Karlov. Univ. 8 no.2:249-256  
' 65.

1. Radiologicka klinika (prednosta - prof. MUDr. J. Bastecky, DrSc.); I. interni klinika (prednosta - prof. MUDr. F. Cernik); Patol. anat. ustav (prednosta: prof. MUDr. A. Fingerland, DrSc.) Lekarske fakulty Karlovy University v Hradci Kralove.

JINDRICOVA, Jirina; VORTEL, Vladimir; FINGERLAND, Antonin; JINDRAK, Karel;  
CHROBAK, Ladislav

Fatal panmyelophthisis degenerated to subacute myeloid leukemia  
caused by benzene. Vnitřní lek. 11 no.10:995-999 0 '65.

1. Krajský ústav národního zdraví, oddělení chorob z povolání,  
Hradec Králové (prednosta: doc. MUDr. Jirina Jindrichova, CSc.),  
Patologicko anatomický ústav lékařské fakulty Karlovy University  
v Hradci Králové (prednosta: prof. MUDr. Antonin Fingerland, Dr.Sc.)  
a I. vnitřní klinika lékařské fakulty Karlovy University v Hradci  
Králové (prednosta: prof. MUDr. Frantisek Cernik).



FINGERLAND, A.

"Boundary and eigenvalue problems in mathematical physics" by  
Hans Sagan. Reviewed by A.Fingerland. Cs cas fys 12 no.3:  
304 '62.

1. Ustav fyziky pevných látek, Československá akademie věd,  
Praha.

FINGERMAN, Yu.

From the fund of public consumption. Sov.shakht. ll no.6:31-32  
Je '62. (MIRA 15:6)

1. Shakhta imeni Lenina, g. Novoshakhtinsk.  
(Nonwage payments) (Coal miners)

KISELEVA, V.L.; POLEZHAYEVA, N.P.; FINGEROVA, A.L.

Electrolytic tinning from sulfuric acid electrolytes with additions of polyethylene glycol esters. Izv.vys.ucheb. zav.; khim.i khim.tekh 2 no.4:578-581 '59.  
(MIRA 13:2)

I. Ivanovskiy khimko-tekhnologicheskii institut. Kafedra tekhnologii elektrokhimicheskikh proizvodstv.  
(Tin plating)

FINGERT, S.S.

Physical development of rural schoolchildren in Pskov Province. Zdrav. Ros. Feder. 8 no.2:12-16 F'63 (MIRA 17:3)

1. Otdel sanitarnoy statistiki (rukovoditel' - dotsent Ye.A. Sadvokasova) Instituta organizatsii zdravookhraneniya i istorii meditsiny imeni N.A.Semashko.

FINGL, J.

Control of water supply in the food industry. p. 305. Vol. 6, no. 6.  
1955. PRUMYSL POTRAVIN. Praha.

Source: East European Accessions List (EEAL), LC, Vol. 5, No. 3. March 1956.

FINGL, Jiri

Standardization helps the operation of public eating facilities.  
Normalizace ll. no.6:175-179 Je. '63.

1. Zavody potravinarskych a chladicich stroju, n.p., Vyzkumny  
ustav, Praha.

FINGL, Jiri

Use of high-frequency and infrared radiation in restaurants.  
Prum potravin 15 no.2:54-61 F '64

1. Zavody Vitezneho unora, n.p., Vyzkumny ustav stroju chladi-  
cich a potravinarskych, Praha.

Synthetic analogs of the curare alkaloids, II. Etia-  
 (tertiary sulfonium salts) and sulfur analogs of succinyl-  
 choline. Miroslav Protiva, Jiří Píml, and Pavla Finglová  
 (Farm. biochem. vyzkumný ústav, Prague, Czechoslov.  
 Chem. Listy 47, 1197-1203 (1953); cf. C.A. 49, 199d.—  
 S analogs of decamethonium iodide and of succinylcholine  
 were prepd. none of which showed practical curarelike  
 activity. Refluxing 9.2 g. Na in 150 ml. EtOH with 23 g.  
 p-HOC<sub>2</sub>H<sub>4</sub>OH in 75 ml. EtOH and with 50 g. MeSCH<sub>2</sub>-  
 CH<sub>2</sub>Cl 6 hrs. gave 16.1 g. (on purification) o-C<sub>2</sub>H<sub>4</sub>(OCH<sub>2</sub>-  
 CH<sub>2</sub>SMe), b.p. 155-60°, m. 47-8° (from EtOH); *MeI*  
*salt*, m. 133-4°. Similarly was prepd. p-C<sub>2</sub>H<sub>4</sub>(OCH<sub>2</sub>-  
 CH<sub>2</sub>SMe) (40%), m. 41-2°, *di-MeI salt*, m. 155-6°.   
 Refluxing 31 g. MeSCH<sub>2</sub>CH<sub>2</sub>OH (I), 150 ml. C<sub>6</sub>H<sub>6</sub>, and  
 18 g. 70% NaNH<sub>2</sub> 1 hr., adding 35.3 g. Br(CH<sub>2</sub>)<sub>2</sub>Br and  
 refluxing the mixt. 7 hrs. gave 19.4 g. (50%) MeS(CH<sub>2</sub>)<sub>2</sub>O-  
 (CH<sub>2</sub>)<sub>2</sub>O(CH<sub>2</sub>)<sub>2</sub>SMe, b.p. 144°, *di-MeI salt*, noncryst.  
 Refluxing 5 hrs. a mixt. prepd. from 4.5 g. Na, 250 ml.  
 EtOH, 21.6 g. MeSCH<sub>2</sub>CH<sub>2</sub>SH (II), and 18.8 g. (BrCH<sub>2</sub>)<sub>2</sub>  
 yielded after dissolving the NaBr in 1 l. H<sub>2</sub>O, 22.5 g. (80%)  
 MeS(CH<sub>2</sub>)<sub>2</sub>S(CH<sub>2</sub>)<sub>2</sub>S(CH<sub>2</sub>)<sub>2</sub>SMe, m. 64-5° (from AcOEt);  
*di-MeI salt*, m. 133°. Similarly were prepd. MeS(CH<sub>2</sub>)<sub>2</sub>S-  
 (CH<sub>2</sub>)<sub>2</sub>S(CH<sub>2</sub>)<sub>2</sub>SMe (85%), b.p. 167-9°; MeS(CH<sub>2</sub>)<sub>2</sub>S-  
 (CH<sub>2</sub>)<sub>2</sub>S(CH<sub>2</sub>)<sub>2</sub>SMe (98%), m. 30°, and MeS(CH<sub>2</sub>)<sub>2</sub>S-  
 (CH<sub>2</sub>)<sub>2</sub>S(CH<sub>2</sub>)<sub>2</sub>SMe (62%), b.p. 180-9°. *Dimethiodides* of  
 the last 3 compds. were oily. Refluxing a mixt. of 4.5 g.  
 Na, 250 ml. EtOH, 21.6 g. II, and 16.1 g. HOCH<sub>2</sub>CH<sub>2</sub>Cl,  
 distg. off the EtOH, dilg. the residue with Et<sub>2</sub>O, filtering  
 off the NaCl and distg. the ext. gave 23.3 g. (78%) MeS-  
 (CH<sub>2</sub>)<sub>2</sub>S(CH<sub>2</sub>)<sub>2</sub>OH, b.p. 160°. From the mixt. of 55.4 g.  
 Me<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>OH (b. 130-3°), 20 g. (CH<sub>3</sub>COEt) (b.  
 85°), and 0.15 g. Na was distd. EtOH at 70-80 mm.

1/2 during 1 hr., and the residue fractionated to give 26 g.  
 (97.5%) [Me<sub>2</sub>N(CH<sub>2</sub>)<sub>2</sub>OCOCH<sub>3</sub>], b.p. 120°; *di-MeI salt*,  
 m. 250-1°. Treating 10.5 g. Me<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>SH in 100 ml.  
 C<sub>6</sub>H<sub>6</sub> at 16° with 7.75 g. (CH<sub>3</sub>COCl) (III) (b.p. 94-6°)  
 in 100 ml. C<sub>6</sub>H<sub>6</sub> gave, after sepg. the NaCl and extg. the  
 alkalized soln. with C<sub>6</sub>H<sub>6</sub>, 7.4 g. (51%) [Me<sub>2</sub>N(CH<sub>2</sub>)<sub>2</sub>-  
 SCOCH<sub>3</sub>], b.p. 166-7°; *di-MeI salt*, m. 197°. Refluxing  
 1 hr. 20.3 g. I in 100 ml. C<sub>6</sub>H<sub>6</sub> with 15.5 g. III gave 21.7 g.  
 (81.5%) [MeS(CH<sub>2</sub>)<sub>2</sub>OCOCH<sub>3</sub>], b.p. 159-61°, *dimeth-*  
*iodide*, m. 169°. Distg. off the EtOH from the mixt. of  
 4.5 g. Na, 80 ml. EtOH, and 21.6 g. II, and refluxing the  
 residue with 125 ml. C<sub>6</sub>H<sub>6</sub> and 15.5 g. III gave 15.3 g.  
 (61%) [MeS(CH<sub>2</sub>)<sub>2</sub>SCOCH<sub>3</sub>], b.p. 198° (*dimethiodide*,  
 oily). Treating 8.6 g. (CH<sub>3</sub>OH) in 10 ml. C<sub>6</sub>H<sub>6</sub>N with 10  
 g. MeSCH<sub>2</sub>CH<sub>2</sub>COCl (IV) (b.p. 70°), gave 11.3 g. (74%)  
 [MeS(CH<sub>2</sub>)<sub>2</sub>CO<sub>2</sub>CH<sub>3</sub>], b.p. 160°. Refluxing 1 hr. the  
 mixt. of 4.45 g. (CH<sub>3</sub>SH) (b.p. 78°), 13.1 g. IV, and 60 ml.  
 C<sub>6</sub>H<sub>6</sub>, yielded 7.3 g. (51%) [MeS(CH<sub>2</sub>)<sub>2</sub>COSCH<sub>3</sub>], b.p.  
 205°. The methiodides were prepd. in Me<sub>2</sub>CO, C<sub>6</sub>H<sub>6</sub>,  
 EtOH, or without solvent, and were crystd. from EtOH  
 or dil. EtOH. III. Pyridine derivatives of pharmacological  
 interest. 9. Quaternary salts of glycol diesters of mono-  
 carboxylic acids of the pyridine and piperidine series.  
 Jiří Píml and Miroslav Protiva. *Ibid.* 1204-6; cf. C.A.  
 49, 337d.—Glycol esters of pyridinemono-carboxylic acid  
 were prepd. and treated with MeI to give the corresponding  
 dimethiodides. Picolinic chloride prepd. by refluxing 15  
 min. 14.6 g. picolinic acid in 1250 ml. C<sub>6</sub>H<sub>6</sub> with 14 ml.  
 SOCl<sub>2</sub>, heated 2 hrs. with 8.5 g. HO(CH<sub>2</sub>)<sub>2</sub>OH gave, after  
 treatment with 6.3 g. NaHCO<sub>3</sub> in 120 ml. H<sub>2</sub>O, 1.1 g.  
 tetramethylene dipicolinate, m. 81-2° (from H<sub>2</sub>O). Most  
 part of the starting acid was recovered. Refluxing 37  
 g. nicotinic acid 2 hrs. with 180 ml. SOCl<sub>2</sub>, evapp. the



2/2 MIROSLAV PROTIVA, et al

unchanged  $\text{SOCl}_2$ , washing the cryst. residue with  $\text{C}_6\text{H}_6$  and refluxing with 6.2 g.  $(\text{CH}_3\text{OH})_2$  (I) in 100 ml.  $\text{C}_6\text{H}_6$  gave, after alkalization with  $\text{KHCO}_3$ , 22.3 g. (82%) ethylene diisocotinate, m.  $126^\circ$  (from  $\text{EtOH}$ ); di-Mel salt, m.  $208^\circ$ . Similar treatment of 37 g. isonicothnic acid (the  $\text{HCl}$  salt of the chloride did not melt below  $200^\circ$ ) with 6.2 g. I gave 19.9 g. (72%) ethylene diisonicotinate, m.  $175^\circ$  (from  $\text{EtOH}$ ); di-Mel salt (II), m.  $213^\circ$  (decompn.). Hydrogenation of II in  $\text{EtOH}$  over  $\text{PtO}_2$  gave 88% di-III salt, m.  $178^\circ$ , of ethylene di-(N-methylisopipercolinate),  $\text{In.}$   $170^\circ$  (insol. in  $\text{Et}_2\text{O}$ ); bis(methiodide), m.  $287-8^\circ$ . M. Hudlický...

FINGERPRINT

Traces of hydrogen peroxide and sodium hypochlorite  
were detected on the surface of the fingerprint.

FINGRUT, I.Ya.; TSITRIN, A.P.

Packless mixer with an electromagnetic drive as a reactor for  
the production of alkyl sulfuric acids. Khim.i tekhn. topl.i masel  
7 no.2:44-49 F '62. (MIRA 15:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh  
prozessov.  
(Sulfuric acid) (Alkylation)

FINHORN, Jerzy; TENNER, Julian; OBORSKA-JADWISZCZOK, Elzbieta

Iodine uptake in the thermal test in various functional conditions of the thyroid gland. Endokr. Pol. 14 no.6s 619-626 N-D '63.

1. III Klinika Chorob Wewnętrznych Sl. Akademii Medycznej w Bytomiu (Kierownik: prof. dr K. Gibinski) i Instytut Onkologii w Gliwicach (Dyrektor: Dr med. J. Swiecicki).

FINIASOV, B. (Vitebsk)

Percentage of honesty. Izobr.i rats. no.11:34 N '62. (MIRA 15:12)

1. Spetsial'nyy korrespondent zhurnala "izobretatel' i ratsionalizator".  
(Technological innovations)

FINICH, h.

Distr: uE2c/uE2c(j)/uE3d

208/60. A 547.455.623 : 548.824'131  
 Investigation of titanium tetrachloride complexes. (In English)  
 Z. Ostró, Gy. Dóka, L. Fenyő. *Acta Chimica  
 Academiae Scientiarum Hungaricae*, Vol. 81, 1969, No. 9,  
 pp. 189-190, 1 fig., 7 tabs.

5  
 1-JAJ(O/B)  
 2-MJC(JD)(RJ)  
 3

gt  
 11  
 CRK

Complexes of various composition, not published thus far in literature, were prepared by the authors through treating a number of sugar derivatives (pentaacetyl glucose, pentabenzoyl glucose, acetochole-glucose, tribenzoyl laevoglucosan, triacetyl laevoglucosan and octaacetyl cellobiose) with titanium tetrachloride. The composition of the formed complexes was found to be affected by two factors, the solubility of complexes of various mole ratio and the conditions of charge of the developed complexes.

FINIKOV - A

FINIKOV, A., inzhener.

Improve the special equipment on the IAK-12M airplane. Grazhd. av.  
14 no.4:25 Ap '57. (MLRA 10:6)

(Aeronautics in agriculture)

FINIKOV, B. I.

AUTHOR: Finikov, B. I., 20-2-13/62

TITLE: On a Family of Classes of Functions in the Algebra of Logic and Their Realizations in the Class of  $\pi$ -Schemata. (Ob odnom semeystve klassov funktsiy algebrы logiki i ikh realizatsii v klasse  $\pi$ -skhem)

PERIODICAL: Doklady Akademii Nauk, SSSR, 1957, Vol. 115, Nr 2, pp. 247-248 (USSR)

ABSTRACT: This paper examines a family of some of these classes, namely of the classes  $R_{n,k}$  of functions, which depend on  $n$  arguments and accept the value 1 exactly on  $k$  sets of the values ( $n$ ) of the arguments. Further the possibility is investigated here to realize the functions from these classes with the aid of P-schemata. The present paper is the continuation of a work by G.N. Igosheva. But the author here uses another algorithm for the realization of the functions of these classes and shows that even in the case of a certain increase of  $k$  the number of the contacts in the P-schemata (which realize the functions from  $R_{n,k}$ ) is asymptotically not higher than  $2n$ . By  $L(f)$  the author here denotes the minimum number of the signs of the variables, which suffice for writing down the function  $f$  with the aid of the formulae used here. Further the function  $L_k(n) = \max L(f)$  is introduced here, where the maximum refers to all functions of  $R_{n,k}$ . Then the following theorem applies:  $L_k(n) \leq 2n + k2^{k-1}$ . Then follows the proof of this theorem. The following corollaries result from this theorem:

Card 1/2



On a Family of Classes of Functions in the Algebra of Logic and Their Realizations in the Class of  $\pi$ -Schemata. 20-2-13/62

1) The sequence  $k_2, \dots, k_n, \dots$  be assumed. When for a certain function  $\varphi(n)$ ,  $\varphi(n) \rightarrow \infty$  the estimation  $k_n \leq \lg_2 n - \lg_2 \lg_2 n - \varphi(n)$ , is valid,  $L_{k_n}(n) \sim 2^n$  applies.

2) When for the sequence  $k_2, \dots, k_n, \dots$  the inequation  $\overline{\lim}_{n \rightarrow \infty} \frac{k_n}{\lg_2 n} < N$  is valid (where  $N$  is a natural number), then applies  $L_{k_n}(n) \sim 2^{Nn}$ .

3) In the case of  $(k_n / \lg_2 n) \rightarrow \infty$ ,  $L_{k_n}(n) \leq (2k_n / \lg_2 n)(1 + o(1))$  applies.

There are 8 references, 4 of which are Slavic.

ASSOCIATION: Moscow State University imeni M.V.Lomonosov. (Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova)

PRESENTED: February 21, 1957, by M.V.Keldysh, Academician.

SUBMITTED: February 10, 1957

AVAILABLE: Library of Congress.

Card 2/2

FINIKOV S.F.

Congruences avec les deux nappes de la surface focale applicables l'une sur l'autre par les points correspondants. Ann. de Mat., 1 (1924), 175-184.

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Moscow-Leningrad, 1948

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393-403.

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Larkushevich, A.L.,  
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FLIKOV S.P.

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Rashevskiy, F.K.,

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FINANCY G.F.

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Rashevskiy, F.K.,  
Moscow-Leningrad, 1948

Findings

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421-427.

SO: Mathematics in the USSR, 1917-1947  
edited by Jurosh, A.G.,  
Markushevich, A.I.,  
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FILKOV S.P.

Congruences paraboliques stratifiables, transformations des surfaces R<sub>0</sub>. C.R.  
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Sur les couples de surfaces dont les asymptotiques se correspondent et qui aux points correspondants ont les memes directrices de Wilczynski. C.R. Acad. Sci., 197 (1933), 883-885.

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edited by Jurosh, A. G.  
Markushevich, A. L.  
Rashevskiy, P. K.  
Moscow-Leningrad, 1948



"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413210013-6

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413210013-6"

Finikov, S. P. *Mathematical Methods of the Theory of Automatic Control*. Moscow: Mashinostroyeniye, 1978. 288 pp. 150 kopecks.

*Matematicheskiye metody teorii avtomaticheskogo upravleniya*. Moscow: Mashinostroyeniye, 1978. 288 pp. 150 kopecks.

proizvodstva. Avtor: S. P. Finikov. Eksternoye izdatel'stvo. Moscow: Mashinostroyeniye, 1978. 288 pp. 150 kopecks.

Differential Equations. The Theory of Compartmental Systems of Total and Partial Differential Equations.

Chel' M. Moscow: Mashinostroyeniye, 1978. 288 pp. 150 kopecks.

The subject matter of the book is considerably broader than the title would indicate. The first chapter is devoted to a thorough treatment of the theory of systems of differential equations. The second chapter is devoted to the theory of compartmental systems. The author, Thomas Finikov, is a well-known expert in the field of differential control systems. The book is written in a concise and organized manner. The author's treatment of the subject is clear and logical. The book is a valuable reference for anyone interested in the theory of automatic control systems. The book is written in Russian and is available in English translation. The book is published by Mashinostroyeniye, Moscow. The book is available in paperback format. The book is priced at 150 kopecks. The book is a good example of the high quality of Soviet technical literature. The book is a valuable addition to any library of technical literature. The book is a good example of the high quality of Soviet technical literature. The book is a valuable addition to any library of technical literature.

Mathematical Reviews, 1980, Vol. 11, No. 1

11/11/78

FILIKOV, Sergei Pavlovich, 1583

Differential geometry; a text-book on methodology for students taking  
correspondence courses from pedagogical institutes. Moskva, Gos. uchebno-  
pedagog. izd-vo, 1949. 108p.

RFB

"APPROVED FOR RELEASE: 06/13/2000

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**CIA-RDP86-00513R000413210013-6**

**APPROVED FOR RELEASE: 06/13/2000**

**CIA-RDP86-00513R000413210013-6"**

FINIKOV, Sergei Pavlovich, 1883

Analytic geometry; lecture course given at Moscow State Pedagogical Institute.  
Izd. 2. Moskva, Gos. uchebno-pedagog. izd-vo, 1952. 326p.  
(53-15765)

QA551.F62 1952

*Struik, S.P.*

**Struik, S. P.** On stratifiable pairs of congruences associated with an isotropic congruence. *Doklady Akad. Nauk SSSR (N.S.)* 73, 899-900 (1950). (Russian).

This short note, which refers to the author's book [Rec. Math. [Mat. Sbornik] (N.S.) 12:54, 287-314 (1943); these Rev. 6:19] and the papers of S. Rössinski: [*C. R. (Paris)*, Vol. 267 (1938) (N.S.) 41, 5-9, 54-56, 101-103 (1943)]; these Rev. 6:19, in the reviews of which we must refer for further details, is devoted to the notation and the results of these papers. The results of these papers are here summarized by a theorem that every stratifiable pair with the possible exception of the case that  $a_1 = a_2 = 1$  is associated with an isotropic congruence of common perpendiculars is contained in a congruence of Bachvaloff which in this case must be an isotropic congruence [Rec. Math. [Mat. Sbornik] (N.S.) 6(48), 67-76 (1939); these Rev. 1, 270].

*D. J. Struik* (Cambridge, Mass.).

Source: *Mathematical Reviews*,

Vol 72 No. 9.

FINIKOV S.P.

The first part of the report is devoted to a general survey of the state of the art in the field of the theory of the stability of the motion of a system of particles. The author analyzes the results of the investigations carried out in this field in the last few years. The author also points out the directions in which the investigations should be carried out in the future.

The second part of the report is devoted to a detailed analysis of the results of the investigations carried out in the field of the theory of the stability of the motion of a system of particles. The author analyzes the results of the investigations carried out in this field in the last few years. The author also points out the directions in which the investigations should be carried out in the future.

The third part of the report is devoted to a detailed analysis of the results of the investigations carried out in the field of the theory of the stability of the motion of a system of particles. The author analyzes the results of the investigations carried out in this field in the last few years. The author also points out the directions in which the investigations should be carried out in the future.

The fourth part of the report is devoted to a detailed analysis of the results of the investigations carried out in the field of the theory of the stability of the motion of a system of particles. The author analyzes the results of the investigations carried out in this field in the last few years. The author also points out the directions in which the investigations should be carried out in the future.

The fifth part of the report is devoted to a detailed analysis of the results of the investigations carried out in the field of the theory of the stability of the motion of a system of particles. The author analyzes the results of the investigations carried out in this field in the last few years. The author also points out the directions in which the investigations should be carried out in the future.

The sixth part of the report is devoted to a detailed analysis of the results of the investigations carried out in the field of the theory of the stability of the motion of a system of particles. The author analyzes the results of the investigations carried out in this field in the last few years. The author also points out the directions in which the investigations should be carried out in the future.

The seventh part of the report is devoted to a detailed analysis of the results of the investigations carried out in the field of the theory of the stability of the motion of a system of particles. The author analyzes the results of the investigations carried out in this field in the last few years. The author also points out the directions in which the investigations should be carried out in the future.

The eighth part of the report is devoted to a detailed analysis of the results of the investigations carried out in the field of the theory of the stability of the motion of a system of particles. The author analyzes the results of the investigations carried out in this field in the last few years. The author also points out the directions in which the investigations should be carried out in the future.

The ninth part of the report is devoted to a detailed analysis of the results of the investigations carried out in the field of the theory of the stability of the motion of a system of particles. The author analyzes the results of the investigations carried out in this field in the last few years. The author also points out the directions in which the investigations should be carried out in the future.

The tenth part of the report is devoted to a detailed analysis of the results of the investigations carried out in the field of the theory of the stability of the motion of a system of particles. The author analyzes the results of the investigations carried out in this field in the last few years. The author also points out the directions in which the investigations should be carried out in the future.



FINIKOV, S.

Finikov, S. A system of  $W$ -congruences with functional  
 arbitrariness. Doklady Akad. Nauk SSSR (N.S.) 79,  
 197-199 (1951). (Russian)  
 Terracini [Atti Accad. Naz. Lincei. Rend. Cl. Sci. Fis.  
 Mat. Nat. (6) 4, 348-352 (1926)] considered so called sys-  
 tems of Bianchi, which are  $W$ -congruences depending on two  
 parameters and with focal surfaces forming two one-para-  
 metric families. The author previously extended these  
 studies [Izvestiya Akad. Nauk SSSR. Ser. Mat. 9, 79-112  
 (1945); these Rev. 7, 32; Uchenye Zapiski Moskov. Gorod.  
 Pedagog. Inst 2, pp. 16ff. (1948)]. Here he proposes a  
 $W$ -system of which the congruences depend on two arbitrary  
 functions of one variable and of which the focal surfaces  
 form two families depending each on one arbitrary func-  
 tion of one variable. It is obtained by placing in  $dA_1 = \omega_1^2 A_1$   
 ( $i, k=1, 2, 3, 4$ , two vertices  $A_1, A_2$  of the tetrahedron  $A_1$   
 in the focal of a ray, two faces  $A_1 A_2 A_3, A_1 A_2 A_4$  in focal  
 planes):

$$\omega_1^2 = 0, \quad [\omega_1^2 \omega_2^2 + \omega_1^2 \omega_3^2] = 0,$$

which equations determine the focal surfaces ( $A_1$ ). There  
 must be an equation of the form

$$\omega_1^2 = A\omega_1^2 + B\omega_2^2 + C\omega_3^2 + D\omega_4^2.$$

Since  $\omega_1^2 = -B\omega_2^2 + \lambda(\omega_3^2 - C\omega_4^2)$ , we obtain for the asymp-  
 totic lines  $(A - BC - \lambda^2 C^2)(\omega_1^2)^2 + \lambda(\omega_2^2)^2 = 0$ . The solution of  
 these equations is further discussed. D. J. Strick.

*Handwritten marks:*  
 C. J. Strick  
 1951

Source: Mathematical Reviews,

Vol 13 No. 4

FINIKOV, S. P.

Mathematical Reviews  
Vol. 14 No. 8  
Sept. 1953  
Geometry.

Finikov, S. P. Kurs differentsial'noi geometrii. [A course of differential geometry.] Gosstatiz. Izdat. Tehn.-Teor. Lit., Moscow, 1952. 343 pp. 3 rubles.  
This book contains an exposition of the elementary differential geometry of curves and surfaces. It opens with an introduction in which the ways are described in which curves and surfaces can be given in coordinate form, how singular points appear, and how contact can be described. Then follow 119 pages on plane and space curves, and 144 pages on surfaces. In both cases sharp distinction is made between differential properties of the first order and those of the second order; in curve theory there is also a section on third order properties, after which the Frenet formulas can be introduced. There are sections on the natural equations of curves and on envelopes, on the intrinsic geometry of surfaces and on the fundamental equations of a surface. Vector calculus is used throughout, and care is shown in dealing with such ticklish subjects as the theory of envelopes. There is a supplement which deals with the existence theorems on implicit functions, with the differentiation of vector functions of a scalar variable and with elementary curve plotting. A few pages are devoted to the history of the subject with special emphasis on Russian contributions. The author mentions the Moscow school of K. M. Peterson, to which B. K. Mlodzevskii and D. F. Egorov belonged, and another school dating back to N. I. Lobačevskii, which is at present represented by the many Russian authors on the tensor calculus, pupils and collaborators of V. F. Kagan. The text is lucid and has a number of good figures; it also contains many exercises with answers. *D. J. Struik.*

FINIKOV, S. P.

The Committee on State Prizes (of the USSR) is pleased to announce the results of the competition for the State Prizes in Science and Technical Invention that the following scientific works, monographs, articles, and textbooks have been submitted for competition for State Prizes for the years 1979 and 1980. (Sovetskaya Nauka, Moscow, No. 10, 1980, p. 104)

Name	Title of work	Submitted by
Finikow, S. P.	Works on theory of surfaces	Moscow State University imeni M. V. Lomonosov

80-1170-100, 1000, 1000

FINIKOV, S.P.

Sergei Sergeevich Biushgens; seventieth anniversary of his birthday. Usp.  
mat.nauk. 8 no.4:185-192 J1-Ag '53. (MLRA 6:8)  
(Biushgens, Sergei Sergeevich, 1882- ) (Mathematics--Bibliography)  
(Bibliography--Mathematics)

Finikov, S. P.

8, No. 6

112

Finikov, S. P. Two problems of contemporary differential geometry. Vestnik Moskov. Univ. Ser. Fiz.-Mat. Estest. Nauk 1953, 3-14 (1953). (Russian)

This is a report on recent work done, mainly by Moscow geometers, in two fields which are essentially in the nineteenth century tradition of Bianchi-Darboux. The first field is that of conjugate sets and congruences, in relation to Laplace transformations. Here considerable attention is paid to the work of T. Koz'mina [C. R. (Doklady) Acad. Sci. URSS (N.S.) 55, 183-185 (1947); these Rev. 8, 531], which was independently supported by S. S. Chern [Proc. Nat. Acad. Sci. U. S. A. 30, 95-97 (1944); Sci. Rep. Nat. Tsing Hun Univ. 4, 328-336 (1947); these Rev. 5, 217; 10, 65]. Other papers on this subject, discussed by the author, include those of B. V. Smirnov [Doklady Akad. Nauk SSSR (N.S.) 71, 437-439 (1950); these Rev. 11, 616], and T. A. Sul'man [ibid. 85, 501-504 (1952); these Rev. 14,

2/2 FURIKOV, S. P.

316]. The second field for which a survey is given is that of so-called stratified pairs of congruences (the name is due to Furini), a topic intimately related to the first. The author, who reopened this domain in 1927, reports mainly on his own work [see, e.g., Mat. Sbornik N.S. 29(71), 349-370 (1951); these Rev. 13, 773]; and also gives an account of thesis work done by several students at Moscow University on Laplace transformations as well as on stratified pairs.

*D. J. Struik (Cambridge, Mass.).*

FINIKOV, S. P.

Mathematical Reviews  
Vol. 15 No. 4  
Apr. 1954  
Geometry

8-24-54  
LL

Finikov, S. P. Stratifiable pairs adjoined to a parabolic congruence of mutual perpendiculars. *Mat. Sbornik* N.S. 33(75), 3-12 (1953). (Russian) math  
3

There have been investigations of stratifiable congruences in which the congruence of mutual perpendiculars was pseudospherical, of the Bianchi type, isotropic, etc. This paper deals with the case that this congruence is parabolic, hence consists of tangent lines to one family of asymptotic lines of a surface. The formulas for the general case, as well as for special cases are derived in detail. Among the results for the symmetrical case we find that the surfaces with one family of asymptotic lines of constant curvature carry on the tangents to these lines a system of  $\infty^1$  stratifiable pairs of congruences. The rays of these congruences intersect the asymptotic tangents orthogonally at points situated symmetrically with respect to the points of contact, and form with the tangent plane of the surface angles equal and of opposite sign. [See S. Finikoff, *Mat. Sbornik* N.S. 12(54), 287-314 (1943); these *Rev.* 6, 19; also L. Bianchi, *Atti Accad. Naz. Lincei., Rend. Cl. Sci. Fis. Mat. Nat.* (5) 33, 2° semestre, 369-377, 521-532 (1924).] *D. J. Struik.*

F/NIKOV, S P.

Enikov, S. P. On the problem of stratification of a pair of complexes. *Matem. Nauk (N.S.)* 9, no. 1(59), 125-130 (1954). (Russian)

*Green by*

The concept of a stratified pair of congruences (for which a family of surfaces is necessary) is generalized to complexes. Two complexes are called stratified if a family of curves is given, and at the points of intersection with the rays of one complex osculating planes to the curves pass through corresponding rays of the other complex, and conversely. This is a natural generalization, since the property holds for stratified pairs of congruences, taking the asymptotic lines of the family of surfaces into account. The analytical apparatus to deal with these complexes is set up by means of a tetrahedron of reference, of which two vertices  $A_1, A_2$  lie on a ray of one complex, and the two other vertices  $A_3, A_4$  on the corresponding ray of the other complex. Then the infinitesimal projective displacement  $dA_i = \omega_i^k A_k$  ( $i, k = 1, 2, 3, 4$ ) can be normalized by  $\omega_2^1 = \omega_1^2$ ; the families of curves can be taken to satisfy the equations  $\omega_1^3 = \mu \omega_1^4$ ,  $\omega_2^3 = \nu \omega_1^3$ ;  $\omega_1^4 = \mu' \omega_1^3$ ,  $\omega_2^4 = \nu' \omega_1^3$ . Special attention is paid to the case  $\omega_1^3 = \omega_1^4$ ,  $\omega_2^3 = \omega_2^4$ , in which the two complexes [12] and [34] have a common tangential complex

*D. J. Struik (Cambridge, Mass.)*



FINIKOV, S.P.

Scientific trends in the department of differential geometry at  
the Moscow State University. Usp.mat.nauk 9 no.4:3-18 '54.  
(Geometry, Differential) (MLRA 8:1)

FINIKOV, S. P.  
USSR/Scientists- Obituary

Card 1/1 : Pub. 41-1/18

Author : Kochina, P. Ya., Blokh, E. L., Kosmodem'yanskiy, A. A., Rabotnov, Yu. N., Sveshnikov, G. N., Talitskikh, N. A., Finikov, S. P., and Chetayev, N. G.

Title : To the memory of Vladimir Vasil'yevich Golubev

Periodical : Izv. AN SSSR, Otd. Tekh. Nauk 12, 3-4, Dec 1954

Abstract : A brief review of the life of the recently deceased Golubev.

Institution :

Submitted :

FINIKOV, S.P., prof.; ATANASYAN, L.S., dots., red.; DZHATIYEV, S.G., tekhn.  
red.

[Programs of pedagogical institutes; differential geometry] Programmy pedagogicheskikh institutov; differentsial'naya geometriia.  
[Moskva] Uchpedgiz, 1955. 1 p. (MIRA 11:9)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye podgotovki uchiteley.

(Geometry, Differential--Study and teaching)

SUBJECT  
AUTHOR  
TITLE

USSR/MATHEMATICS/Geometry

CARD 1/1

PG - 145

PERIODICAL

FINIKOV S.P.  
Differential geometry. Textbook for physical-mathematical  
faculties of educational institutes.  
Moscow: State publication 1955, 215p.  
reviewed 7/1956

As the title indicates this textbook is written with an eye on the education of future teachers, in connection with the plans for polytechnical education in secondary schools. It contains the classical material on curves in the plane and curves in the space, together with surface theory, presented wherever possible with cinematographical methods. Vector methods are used throughout, with here and there a touch of the  $\omega$ -notation. The exposition is clear and attractive, the illustrations are clear. Instructors, faced with the task of giving a one-semester introduction to differential geometry, will find a look at this book very helpful.

FINIKOV, Sergey Pavlovich; VASIL'YEVA, M.V., redaktor; GAVRILOV, S.S.,  
tehnicheskii redaktor

[Theory of congruent pairs] Teoriia par kongruentsii. Moskva,  
Gos. izd-vo tekhniko-teoret. lit-ry, 1956. 443 p. (MLRA 10:4)  
(Congruences (Geometry))

BAKHVALOV, S.V., prof.; FINIKOV, S.P., prof., red.; KREYS, I.G., tekhn.  
red.

[Programs of pedagogical institutes; analytic geometry for physics  
and mathematics faculties; major: mathematics] Programmy pedago-  
gicheskikh institutov; analiticheskaya geometriya dlia fiziko-  
matematicheskikh fakul'tetov. Spetsial'nost' - matematika.  
[Moskva] Uchpedgiz. 1957. 5 p. (MIRA 11:9)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye vysshikh i  
srednikh pedagogicheskikh uchebnykh zavedeniy.  
(Geometry, Analytic--Study and teaching)

FINIKOV, S. P.

AUTHOR: FINIKOV, S.P. (Moscow)

39-2-3/7

TITLE: The Transformation W of the Cartan Manifolds of Singular Projective Type (Preobrazovanie W kartanovykh mnogoobraziy osobogo proyektivnogo tipa)

PERIODICAL: Matematicheskiy Sbornik, 1957, Vol.43, Nr.2, pp.169-186 (USSR)

ABSTRACT: According to the author, the p-dimensional manifolds  $Sp$ ,  $Sp^*$  are in the relation of the transformation W if in certain domains between their points there can be established a biunique relation  $M \rightleftharpoons M^*$  such that the straight line  $MM^*$  belongs to both tangential subspaces of  $Sp$  and  $Sp^*$  in  $M, M^*$  and that the systems of the second quadratic forms are equivalent. For the Cartan manifolds  $\mathcal{W}_p \rightarrow \mathcal{W}^*_p$  it is demanded that by the transformation W the p-conjugate system of curves of one manifold goes over into the p-conjugate system of the other manifold. Besides it is assumed that W does not degenerate to a W-transformation of the Cartan manifolds  $\mathcal{W}_q \rightarrow \mathcal{W}^*_q$  ( $q < p$ ). Under these assumptions the transformation W admits only even-dimensional Cartan manifolds  $\mathcal{W}_{2q}$ . The pairs of Cartan manifolds, being in relation to the transformation W, exist, where p(p-1) functions of two elements remain arbitrary. Two Soviet and 2 foreign references are quoted.

Card 1/2

The Transformation W of the Cartan Manifolds of Singular  
Projective Type

39-2-3/7

SUBMITTED: December 12, 1956  
AVAILABLE: Library of Congress

Card 2/2



AUTHOR: ~~Finikov, S.P.~~ SOV/20-120-6-13/59  
TITLE: Surfaces of Voss in  $E_4$  (Poverkhnosti Fossa v  $E_4$ )  
PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 120, Nr 6, pp 1214-1216 (USSR)  
ABSTRACT: The author considers 2-dimensional surfaces in  $E_4$  with conjugate Voss net. The most essential properties of the ordinary Voss surfaces in the  $E_3$  are transferred to this surface. The connection existing in the  $E_3$  between the surfaces of Voss and surfaces of Guichard [Ref 2] is no longer valid in the  $E_4$ . There are 2 non-Soviet references, 1 of which is German, and 1 French.  
PRESENTED: February 20, 1958, by P.S.Aleksandrov, Academician  
SUBMITTED: February 18, 1958

1. Mathematics

Card 1/1

FINIKOV S.P.

16(1) PHASE I BOOK EXPLOITATION 50V/2660  
Vsesoyuznyy matematicheskiy s'ezd. 3rd, Moscow, 1956

Trudy. t. 4: Kratkiye soobsheniya sektsionnykh dokladov. Doklady inostrannykh uchennykh (Transactions of the 3rd All-Union Mathematical Conference in Moscow. vol. 4: Summary of Sectional Reports. Reports of Foreign Scientists) Moscow, Izd-vo AN SSSR, 1959. 247 p. 2,200 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Matematicheskiy institut.

Tezh. Ed.: G.M. Shvachko; Editorial Board: A. Abramov, V.G. Boltsynskiy, A.M. Yuzvinskiy, A.D. Muzikich, S.M. Nikol'skiy (resp. Ed.), B.G. Kostin, Yu. V. Prokhorov, K.A. Rybnikov, P. L. Ul'yanov, V.A. Uspenskiy, M.O. Chetayev, G. Ye. Shilov, and A.I. Shirshov.

PURPOSE: This book is intended for mathematicians and physicists.

COVERAGE: The book is Volume IV of the Transactions of the Third All-Union Mathematical Conference, held in June and July 1956. The book is divided into two main parts. The first part contains summaries of the papers presented by Soviet scientists at the Conference that were not included in the first two volumes. The second part contains the text of reports submitted to the editor by non-Soviet scientists. In most cases, the non-Soviet scientist did not submit a copy of his paper to the editor. The title of the paper is cited and, if the paper was printed in a previous volume, reference is made to the appropriate volume. The papers, both Soviet and non-Soviet, cover various topics in number theory, algebra, differential and integral equations, function theory, functional analysis, probability theory, topology, mathematical problems of mechanics and physics, computational mathematics, mathematical logic and the foundations of mathematics, and the history of mathematics.

<u>Kemerich, N.Y. (Moscow-na-Dom). Generalization of the Schwarz theorem derived by means of a multidimensional descriptive geometry</u>	77
<u>Nikol'skiy, P.Y. (Sverdlovsk). Binary anamorphosis of analytic equations</u>	78
<u>Pisunov, M.I. (Leningrad). Axiomatic study of space-time structures</u>	78
<u>Finikher, S.P. (Moscow). Transformation of W Cartan manifolds to a paracircular-projective type</u>	79
<u>Matipov, A.Z.-A. (Sverdlovsk). On the theory of surfaces in spaces with a decomposable absolute</u>	80
Section on Mathematical Logic and the Foundations of Mathematics	
<u>Obukiyev, L.P. (Tbilisi). On the subject of mathematics</u>	83
<u>Yasenin-Volpin, A.S. (Moscow). On the second order theorem</u>	84
Card 16/34	

16(0) PHASE I BOOK EXPLOITATION SOV/3177

Matematika v SSSR za sorok let, 1917-1957. tom 1: Obzoruyemye stat'i (Mathematics in the USSR for Forty Years, 1917-1957) Vol. 1: Review Articles) Moscow, Fizmatgiz, 1959. 1002 p. 5,500 copies printed.

Eds: A. G. Kurosh, (Chief Ed.), V. I. Bityutskov, V. G. Eshyansky, Ye. B. Dynkin, G. Ye. Shilov, and A. P. Yunkевич; Ed. (Inside book): A. P. Lapko; Tech. Ed.: S. N. Akhizov.

PURPOSE: This book is intended for mathematicians and historians of mathematics interested in Soviet contributions to the field.

COVERAGE: This book is Volume I of a major 2-volume work on the history of Soviet mathematics. Volume I surveys the chief contributions made by Soviet mathematicians during the period 1917-1957. Volume II will contain a bibliography of major works in the field and biographical sketches of some of the leading mathematicians. This work follows the tradition set by two earlier works: Matematika v SSSR, Prilozheniye k spetsial'nomu spisku (Mathematics in the USSR for 15 Years) and Matematika v SSSR za tridtsat' let (Mathematics in the USSR for 30 Years). The book is divided into the major divisions of mathematics, i.e., algebra, topology, theory of probabilities, functional analysis, etc., and contributions and outstanding problems in each discussed. A listing of some 1400 Soviet mathematicians is included with references to their contributions in the field.

Language: Russian. Mathematical Studies Connected With the Use of Computers. 1. Theoretical studies in programming 957 2. Monarithmetical studies 958 3. Theoretical studies of arch systems 867 4. Certain other problems of mathematical cybernetics 869 874

Surovaya, M. N. Programming 879

Mikhailov, S. V. Monography 887

Chetverushin, M. P. Descriptive Geometry 893 1. Fundamental theorem of axonometry and its generalization 893 2. Multidimensional descriptive geometry 895 3. Parametric method of studying images. Positional and metric completeness 896 4. Other problems 897

Vasil'ev, A. M., Novden, A. P., and Pinskiy, S. P. Differential Geometry 899 1. Problems of classical differential geometry and their generalizations 899 2. Riemann spaces and spaces of affine connection 899 3. Theory of n-tn 907 4. Induced connections 911 5. Complex spaces 915 6. Theory of geometric objects 916

Istikov, M. V. Geometry "in the Large" 925 1. Geometry on a convex surface 925 2. Single valued determination of convex surfaces 926 3. Regularity of convex surfaces with regular metric 930 4. General theory of surfaces. Polyhedra 932 5. Existence, uniqueness, and regularity of surfaces under given conditions of Gaussian curvatures 933 6. Certain nonlinear boundary value problems 942 7. Singularity of surfaces given a function of the principle curvatures 944 8. Arithmetic invariants. Theorems on local deformations 946 9. Indefinitesimal bandings 948 10. Certain results on synthetic geometry 951

Yunkевич, A. P. The History of Mathematics 953 1. Introduction 953 2. Mathematics of the ancient East 953 3. Mathematics of ancient Greece 955 4. Mathematics in the Middle Ages 957 5. Works of modern mathematicians 960 6. Problems on the history of various disciplines and problems; works of a general nature 965

Author's Index 980

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FINIKOV, Sergey Pavlovich; KAPUSTINA, V.S., red.; MASLENNIKOVA, T.A.,  
tekhn. red.

[Differential geometry; course of lectures held at the mechanics  
branch of the Faculty of Mathematics and Mechanics of Moscow  
State University] Differentsial'naiia geometriia; kurs lektsii,  
chitannyi na mekhanicheskom otdelenii mekhaniko-matematicheskogo  
fakul'teta MGU. Moskva, Izd-vo Mosk. univ., 1961. 157 p.  
(MIRA 15:1)

(Geometry, Differential)

ALEKSANDROV, P.S.; FINIKOV, S.P.

Eduard Cech; obituary. Usp. mat. nauk 16 no.1:119-126 Ja-F  
'61. (MIRA 14:6)  
(Cech, Eduard, 1893-1960)

ALEXANDROV, P.S.; FINIKOV, S.P.

Eduard Cech; an obituary. Poroky mat fyz astr 7 no.1:36-38 '62.

CARTAN, Elie Joseph (1869- ); FINIKOV, S.P.[translator]

[Riemann geometry in an orthogonal set of linearly independent vectors]Rimanova geometriia v ortogonal'nom repere. Po leksiiam Eli Kartana, chitanym v Sorbonne v 1926-1927 gg. Perevod i red.S.P.Finikova. Moskva, Izd-vo Mosk. univ., 1960. 306 p. Translated from the French.

(MIRA 15:10)

(Spaces, Generalized) (Calculus of tensors)

POLYAKHOV, N.N.; SEKERZH-ZEN'KOVICH, Ya.I.; SMIRNOV, V.I.; FINIKOV, S.P.

Leonid Nikolaevich Sretenski; on his 60th birthday. Usp.mat.  
nauk 18 no.1:191-204 Ja-F '63. (MIRA 16:2)  
(Sretenski, Leonid Nikolaevich, 1902-)



FINIKOV, S.P.

Six-dimensional Voss's surfaces in a nine-dimensional adjoining  
space. Uch. zap. MGPI no.208s9-30 '63. (MIRA 19s6)

FINIKOV, V. G.

FINIKOV, V. G.--"A Study of Isotope Exchange between Gaseous Oxygen and the Sulfates of Alkali Elements at Higher Temperature." Acad Sci USSR. Inst of Physical Chemistry. Moscow, 1955. (Dissertation for the Degree of Candidate in Chemical Science).

SO Knizhnaya letopis'  
No 2, 1956.

1 Microcrystalloscopy of Reinecke compounds

Рейнеке, *Zhurny Zapiski Sverdlovsk. Univ.* 42, 67, 1957

*Prilozhenie, Khim. 1956, Abstr. N. 30, 2*

Reinecke salt  $(NH_4)_2Cr_2(SO_4)_3$  yields stable ppt.

2)  $Cu^{++}$ ,  $Cu^{+}$ ,  $Ag^{+}$ ,  $Hg^{++}$ ,  $Hg^{+}$ ,  $Pb^{++}$ ,  $Sb^{+++}$

and  $Bi^{+++}$ . The microcrystalloscopic methods of detection

of  $Cd^{++}$ ,  $Bi^{+++}$ , and  $Sb^{+++}$  in form of Reinecke salts

and the application of mixts of Reinecke salts and  $(NH_4)_2SO_4$

sols for detection of  $Cd^{++}$ ,  $Bi^{+++}$ ,  $Cu^{++}$ , and  $Cu^{+}$

are described.  $Cd$  Reineckate gives yellow needles when

dild. 1:1000 and a combination of rhombic bipyramids and

2 pinacoids in 1:100-1:10,000 dilns.  $Bi^{+++}$  Reineckate

gives nontransparent crystals, grown together in pairs.

$Bi^{+++}$  Reineckate yields nontransparent spherulites when

the soln. is dild. and before it is hydrolyzed. With  $(NH_4)_2SO_4$

as the 2nd agent for the formation of the mixed complex the

sensitivity of the reaction is increased. The colors of the

ppts. are the same. The  $Bi^{+++}$  complex ppts. after hydrolysis

in form of branched, bent, orange crystals, the endings

of which are yellow in the presence of  $Cd^{++}$ . The form

of crystals of the complex plus  $Cd^{++}$  depends on the diln.

For  $Cd^{++}$  the sensitivity is 2% in the absence of  $(NH_4)_2SO_4$

and 0.15% in its presence. The limiting dilns. are 1:16,000

and 1:200,000, resp. The crystals of the analogous complex

with  $Cu^{++}$  are in the form of bundles of yellow-green

color, in the presence of  $Cd$  they are almost brown in 1:2000

1-4000 diln. range. The form of complexes with  $Cu^{+}$  (yellow

branches) is independent of diln. The sensitivity of

the reaction is 1.3%. Limiting diln. is 1:25,000

V. S. Mubailov

*Full name of G.*

✓ Oxygen isotope exchange with liquid water solutions at high temperatures