

# Curriculum vitae

**Date of birth:** 01.30.47

**Place of birth:** Karaganda, USSR

**Marital status:** married, two children

## **Current address:**

PH Div.

CERN, Geneve-23, Switzerland, CH-1211

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## **Education**

— *Doctor of Science* 1981, Physics and Mathematics (Research Professor, USSR Academy of Sciences, Moscow)

— *Ph.D.* 1976, Physics and Mathematics, USSR Academy of Sciences, Moscow

— *M.Sc.* 1971, Physics, Moscow Physical and Technical Institute, USSR

## **Employment**

### **In Russia**

*2005–present:* Principle/Chief Scientist, Institute of Chemical Physics, Russian Academy of Sciences, Moscow

*1997–2000:* Principle/Chief Scientist, Institute of Applied Mechanics Russian Academy of Sciences, Moscow

*1971–1997:* Researcher, PhD student, Senior Scientist and then Leading Scientist Institute for Physical Problems USSR Academy of Sciences,

*Moscow 1966–1969:* Research Student, Korolev Space Flight Centre, Moscow Region

### **Abroad**

*2005–present:* Associated to CERN. Visiting Professor at Weizmann Institute of Science, Israel and UNAM, Mexico, Invited Professor Ecole Nationale Supérieure des Mines, St. Etienne, France

*2004–2005:* Professor at the Polytechnic University Leonardo da Vinci, Paris

*1998–2004:* Visiting Professor, Project Leader, Royal Institute of Technology, Stockholm, Sweden

*1995–1988:* NRC Senior Res. Ass, NASA Marshall Space Flight Centre, USA

*1995–1995:* Invited Professor, Coimbra University, Portugal

*1992–1995:* Appl. Phys.-II, Fermi National Accelerator Laboratory, U.S.A.

*1986–1992:* Associate Scientist, CERN (European Organization for Nuclear Research), Switzerland

## Research experience and Main achievements

**CERN ALICE experiment.** Participation at the ALICE RICH detector construction and developing a new RICH technique and gas electron multiplier (GEM)-based Time Projection Chamber for the upgrade ALICE.

Member of the RD-51 collaboration at CERN. Invented and developed a new generation of spark-protected micropattern detectors with resistive electrodes. Some of these new detectors were demonstrated at the Palexpo Exhibition of Inventions in Geneva, in Atomic Energy exhibition in Moscow, 2008 and at the Hannover Messe, Germany 2014

**Royal Institute of Technology, Stockholm, Sweden.** Participation at the nTOF experiment at CERN. Developing new detectors for high-energy physics experiments and for medical applications. This includes a portal imaging device for cancer treatment machines and a digital scanner for mammography.

**Marshall Space Flight Centre, U.S.A.** Developing and study new micropattern X-ray imaging detectors for the NASA MIXE flight experiment and other applications.

**CERN (G. Charpak group), Switzerland; Fermilab, U.S.A.; Coimbra University, Portugal, 1986-1995.**

*The main result of this work was the development of position-sensitive gaseous detectors with CsI and other solid photocathodes.* This work is leading to a new generation of Ring Imaging Cherenkov detectors, adopted now for several large-scale experiments at CERN and in the USA: ALICE, HADES, COMPASS, STAR and others.

## Plasma diagnostics and plasma physics

**Institute for Physical Problems USSR Academy of Sciences** (P.L. Kapitza group, Moscow, USSR, 1969-1986)

Developed new methods and detectors for the measurement of plasma parameters in the vacuum ultraviolet and X-Ray region. Using these methods and devices *a new type of instability* in high-pressure discharges, connected with the accumulation of excited atoms and molecules, *was discovered.*

## Teaching

Physic lectures, practical courses and laboratory works at the Chemical Lyceum, Moscow.

Supervise student's research works in Moscow Gymnasium.

Lectures at Instrumentation schools for graduated students (Torino and Otranto, Italy, Bogota, Colombia)

Regularly supervised CERN summer students as well MS students attached to ALICE experiment

Lectures for students at the Royal Institute of Technology, supervised MSc works, Stockholm, Sweden

Lectures for the students of the World Lab, Switzerland

Supervised and directed several MSc. and Ph.D. works at the Institute for Physical problems

USSR Academy of Sciences

Seminars and regular laboratory courses at Moscow Physical and Technical Institute.

### **Professional membership and awards**

Member of Italian Physical Society (1991–to present)

Member of American Physical Society (1993–1999)

Prize of the World Federation of Scientists, World Lab, 1991

Fermilab Award for the invention, 1993

P.L. Kapitza medal, Moscow 1997

Bronze Medal from the Palexpo Exhibition on Inventions, Geneva, 2007

### **Activity for scientific community**

Participant of the International Meeting “Our Nature” (Italy, 1992)

Participant of the International Conference on Chemical Disarmament’s (Italy, 1989)

Member of scientific advisory committees for various International Conferences on

Instrumentation and Imaging and RICH technique

Served as referee in several journals, for example Soviet Physics JETP, Applied Physics Letters, Pribori and Technika experiments, Nucl. Instruments and Methods, IEEE Nucl. Sci., JINST and etc.

Member of the Editorial Board of JINST, Journal of Instrumentation (2005-2014)

Served as a consultant at Siemens, XCounter AB, DigiRay AB, Proportional Technology Inc. Forimtech AB

### **Publications**

Two books: “Imaging gaseous detectors and their applications” (with E. Nappi), Wiley-VCH, Berlin, 2013

and

“Innovative Applications and Developments of Micro-Pattern Gaseous Detectors” (together with T. Francke), IGI Global, 2014.

Around 300 publications in peer-reviewed scientific journals

### **Patents**

Fourteen International patents on various radiation detectors and techniques

### Ten the most important publications:

1. "Imaging gaseous detectors and their applications" (with E. Nappi), Wiley-VCH, Berlin, 2013
2. "Innovative Applications and Developments of Micro-Pattern Gaseous Detectors" (together with T. Francke), IGI Global, 2014
3. K. Aamond et al., The ALICE experiment at the CERN LHC.  
Journal of Instrumentation . 2008; 3 S08002. DOI: 10.1088/1748-0221/3/08/S08002
4. . K. Aamond et al., Suppression of Charged Particle Production at Large Transverse Momentum in Central Pb--Pb Collisions at  $\sqrt{s_{\text{NN}}} = 2.76$  TeV. Physics Letters B 08/2011; 696:30-39. DOI: 10.1016/j.physletb.2010.12.020
5. . K. Aamond et al., Elliptic Flow of Charged Particles in Pb-Pb Collisions at  $\sqrt{s_{\text{NN}}} = 2.76$  TeV. Physical Review Letters, 12/2010; 105(25):252302. DOI: 10.1103/PhysRevLett.105.252302
6. J. Seguinot et al. Reflective UV photocathodes with gas-phase electron extraction: solid, liquid, and adsorbed thin films. Nuclear Instruments and Methods in Physics Research, Section A , 1990; 297(1-2):133-147. DOI: 10.1016/0168-9002(90)91359-J
7. V. Peskov et al. Liquid and solid organic photocathodes. Nuclear Instruments and Methods in Physics Research, Section A , 1988; 269(1):149-160. DOI: 10.1016/0168-9002(88)90872-8
8. Measurement of the n\_TOF beam profile with a micromegas detector. Nuclear Instruments and Methods in Physics Research, Section A 2004; 524(1-3):102-114.  
DOI: 10.1016/j.nima.2004.01.055
9. G.D. Bogomolov, et al, "Experimental Investigations of Streamer Filaments in High Frequency Plasma Columns Under High Pressure", Soviet Phys. JETP, 93 (1987)519
10. V.D. Peskov, et al, "Spatially non-uniform Filters for ultrasoft X-rays", Letters to Journ. Exp. and Theor. Phys., 17 (1973) 197 .