



The Guru:
Vladimir Shuin

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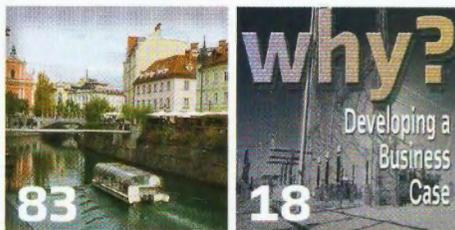
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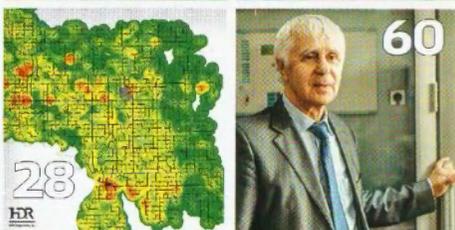
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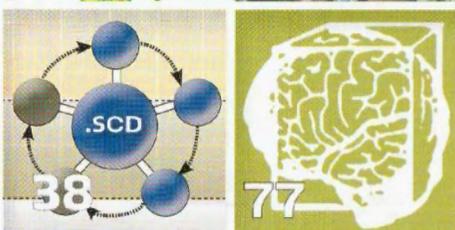
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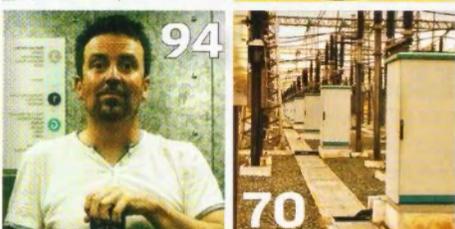
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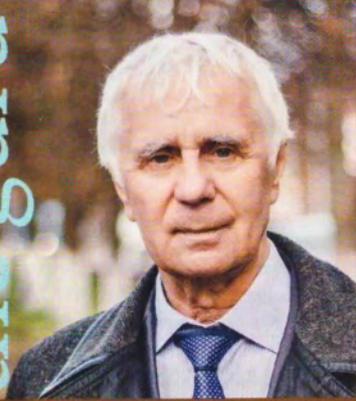
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the guru



my motto:
Work hard
and endure.
The result is
sure to be.



Young Vladimir at work



Vladimir Shuin always at work

MASSACHUSETTS

Scientific work
essentially
begins
with the
understanding
and the
evaluation of
the research
results.

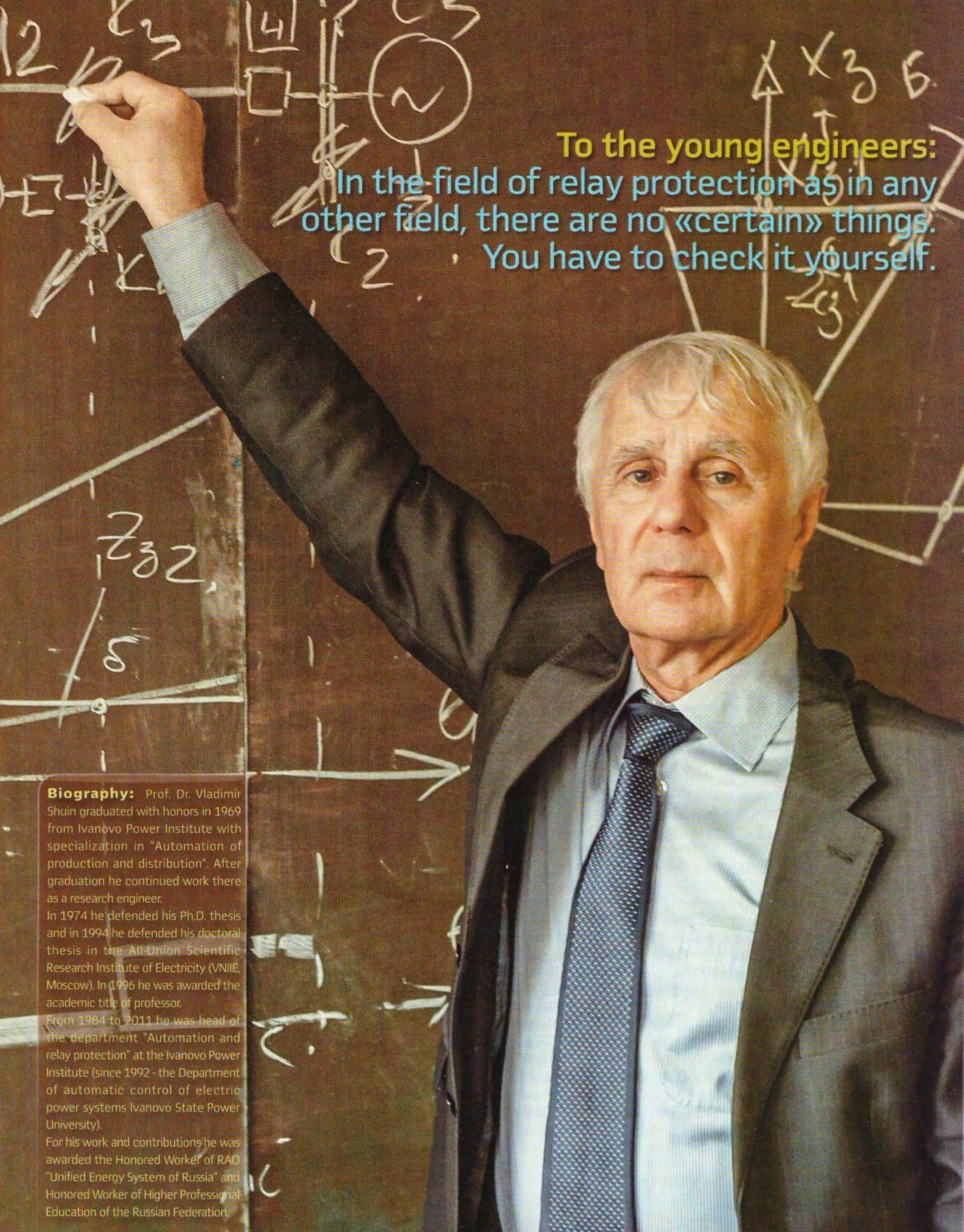


2003: Medal for managing scientific students' work



2014: Award for contribution in the development of Relay Protection and Automation





To the young engineers:
In the field of relay protection as in any other field, there are no «certain» things. You have to check it yourself.

Biography: Prof. Dr. Vladimir Shuin graduated with honors in 1969 from Ivanovo Power Institute with specialization in "Automation of production and distribution". After graduation he continued work there as a research engineer.

In 1974 he defended his Ph.D. thesis and in 1994 he defended his doctoral thesis in the All-Union Scientific Research Institute of Electricity (VNIIE, Moscow). In 1996 he was awarded the academic title of professor.

From 1984 to 2011 he was head of the department "Automation and relay protection" at the Ivanovo Power Institute (since 1992 - the Department of automatic control of electric power systems Ivanovo State Power University).

For his work and contributions he was awarded the Honored Worker of RAO "Unified Energy System of Russia" and Honored Worker of Higher Professional Education of the Russian Federation.



PAC World: When and where were you born?

V.S.: I was born on February 20, 1946 in Vladivostok.

PAC World: Where did you go to school and is there something special about it?

V.S.: The first three years I went to an elementary school in Vladivostok. Then my family moved to Ivanovo and I went to a high polytechnic school (11 years of education) and graduated in 1964 with a medal. Up to 9th grade we went to school together with students from the Children's International House named after E.D. Stasova. It was a very unusual atmosphere for the Soviet school: fellows from Spain, Greece, Iran, Cuba, Germany, China, Korea and other countries (different in their outlooks on life, most of them very talented) who came to learn, make friends, doing sports with the Russian guys and girls. While studying in 9-11 grades we worked at an engineering plant. These factory toolmaker skills (activity requiring special care and precision) are useful for life.

My first teacher

O.V. Lebedev

said once that

overcurrent

protection is

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the atom.

PAC World: What specific interests did you have while in school?

S.V.: My main interests were in mathematics, physics, chess and athletics.

In the last three years in school (9-11th grades) we were intensively preparing all together to enter the Moscow Institute of Physics and Technology. We spent almost every weekend in the regional scientific library, and we went through all-available literature on physics: «Physics for the Inquiring Mind» by Eric Rogers, «Elementary physics course» by Grigory Landsberg, Feynman Lectures on Physics, Berkeley physics course and others.

We have covered almost all math competitions' tasks held in the Moscow Institute of Physics and Technology, Moscow Engineering Physics Institute, Lomonosov Moscow State University.

PAC World: Is there someone in your family who had influence on your decision to become an engineer?

V.S.: I think, no. My father was a military man, and his mother was engaged with our education (I also have two brothers).

I think that the main role in choosing a profession was played by the fact that in the post-war years engineering specialties were the most prestigious, and at school a lot of attention was paid on mathematics and physics training.

PAC World: Why did you decide to continue your education and study engineering?

V.S.: In the 60s it was considered that the development of power engineering is the foundation of all industries in the country. The Soviet achievements in the field of construction of new powerful hydroelectric, thermal and nuclear power plants were well known to school children. At the same time, the engineer profession in those years was considered the most prestigious. All this played a major role in the choice of electricity as an area for future activities.

PAC World: How did you choose the university to go to?

V.S.: Home circumstances did not allow me to go to the Moscow Institute, and in 1964 I entered the Ivanovo Power Institute. The university choice was clear for me: the Ivanovo Power Institute was well known in the country for a high level of engineers training in the power industry, power and electrical engineering.

PAC World: When and how did you choose what specialty to go into?

V.S.: The most prestigious for all students was a specialty related to the automation of the technological processes in the power industry called "Relay protection and automation of power systems." The base of professional knowledge were physics and electrical engineering, and this determined my choice. Almost all the exams had to be passed with Excellency to go into this specialty, so good training in physics and mathematics played an important role.

PAC World: Did you study electric power systems protection while in university?

V.S.: The Chosen specialty involved an in-depth study of the issues related to relay protection and automation of the power system which included several special courses and diploma thesis.

PAC World: Was there any professor that helped you select your future career path?

V.S.: An important role in my understanding the importance and attractiveness of a future profession was played by a scientific work under the guidance of Oleg V. Lebedev that I was involved in since the third year of my university education.

Oleg V. Lebedev was a Head of the Power System Relay Protection and Automation Department during 1967-1974, and has made an enormous contribution to the development of research work and involving students into it.

He was attractive not only with the novelty of the scientific work, but with his passion for science, originality of thinking, and the willingness to seat with the students every day until late.

A huge influence on me as a scientist had an acquaintance with the outstanding scientist, one of the founders of the Soviet power industry - Professor Alexander M. Fedoseyev from the Moscow Power Engineering Institute who supported me in my research and developments.

PAC World: What was your first job?

V.S.: My first job was related to the use of magnetic discrete elements for the relay protection, in particular for earth fault



protection in medium voltage electrical networks with isolated neutral, or with the compensation of capacitive currents. In 1974 I defended my Ph.D. thesis on the topic "Earth faults protection based on comparing the amplitudes of the transient currents in 6-10 kV compensated cable networks" at the Moscow Power Engineering Institute.

When working on my Ph.D. thesis I was struck by the incompleteness of the knowledge in the field of transients in medium voltage networks during earth faults.

This fact mainly determined my interest for research in this field and the use of computer simulation. My doctoral thesis (In 1994 I defended it in the All-Union Scientific Research Institute of Electricity (VNIIE, Moscow)) was also related to the research and development in this field.

PAC World: What do you think is the relationship between teaching and research and did you have a preference?

V.S.: In my opinion, nothing more contributes to broadening and expanding the professional knowledge and the increase of the qualification of a teacher, as carrying out research, participating in the field tests' applications of your developments, writing scientific papers, and sharing your views with colleagues during conferences.

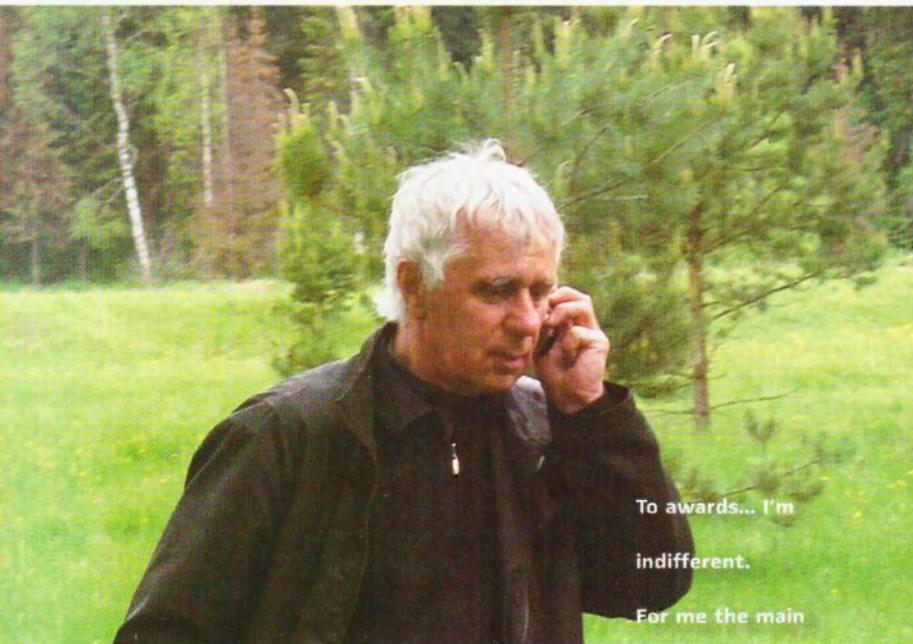
Scientific research usually stimulates preparing and widening the lecture and seminar materials, and the development of new labs.

It often determines the choice of the topics of students qualifying thesis. So, to me teaching and research are inextricably linked.

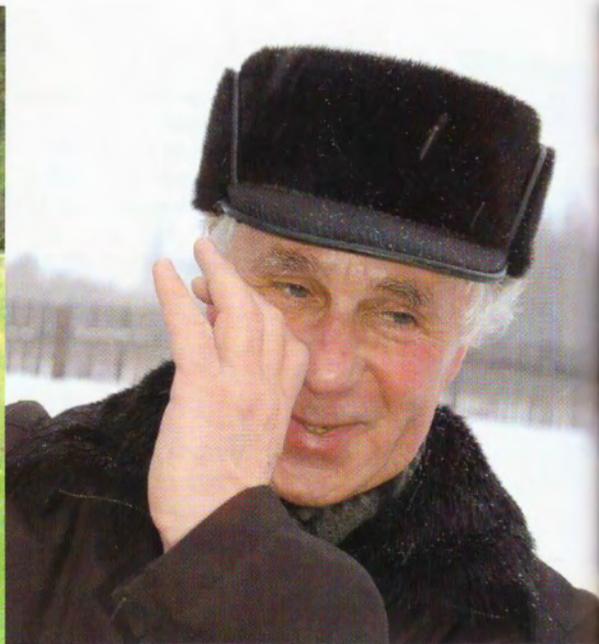
PAC World: Is there any event from this time that you would never forget?

V.S.: It is probably events associated with my children (I have three daughters). They grew up and I met the

Students change their mindset, however the potential abilities of the students from the 60s and today's students, in my opinion, do not differ.



To awards... I'm
indifferent.
For me the main



expectations of grandchildren (three granddaughters and two grandsons), they grow and also justify my hopes.

PAC World: How did you become a protection engineer?

V.S.: Perhaps this is thanks to good teachers. First of all O.V. Lebedev, A.M. Fedoseyev. And many others. The complexity of the profession which requires knowledge of electrical engineering, power engineering and automatic control also attracted me.

Well, at last, selectivity, stability and reliability are good qualities, not only for relay protection, but also for any person.

PAC World: What had the greatest impact on your development as a specialist?

V.S.: Research work, teaching courses on the specialty that requires to constantly improve and extend your knowledge, guidance for the research of PhD, and masters students.

PAC World: What is the most challenging project that you worked on during your career?

V.S.: Every project was challenging in its own way. But the last one seems to be the most difficult.

It was associated with the development of a complex solution that provides selective earth fault protection in medium voltage cable networks with different modes of neutral grounding, identification of all fault types, proper control actions in case of fault and faulted zone location.

The proposed solution, from our point of view, can increase the reliability of electric power supply.

PAC World: What do you consider your most important professional achievement?

award are the
students, who are
not satisfied with
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V.S.: Perhaps my most important achievement is methods, tools and results of research of transients during earth fault in medium voltage distribution networks (especially cable networks) that are allowed to offer new and more effective protection algorithms based on the use of transients characteristics and to develop ways to improve dynamic stability of the traditional protections under transient conditions.

PAC World: Why did you start writing papers and what do you think about the importance of participating in conferences?

V.S.: Scientific work essentially begins with the understanding and the evaluation of the research results, which is usually done in papers. Presentation of your developments, discussions with the wide scientific community provides an objective assessment for your research significance.

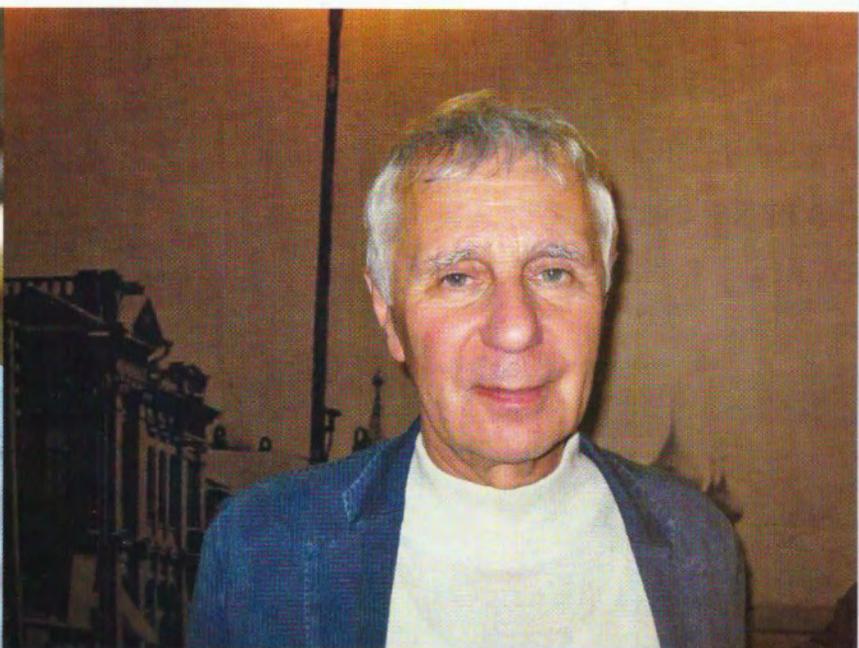
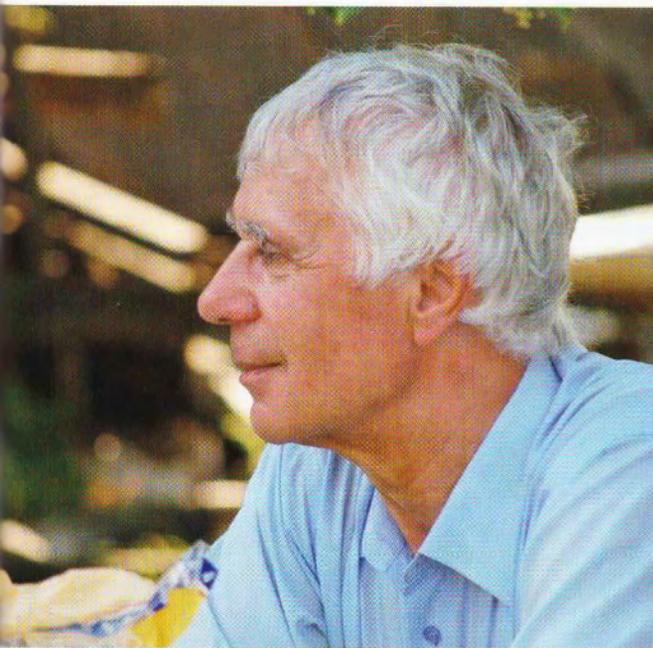
Conferences is also an opportunity to objectively assess the level of your own research and to compare it with other specialists' developments. It provides also new knowledge and new personal contacts. All of these are very important on the way to being a scientist.

One can only be glad for today's young scientists of Russia: they got the opportunity to participate not only in Russian, but also in foreign conferences.

PAC World: What is the difference between the students when you started teaching and the students today?

V.S.: Students change their mindset. The students of my time were mostly romantics. Modern students are more practical and focused on a career. They have a much wider area of interest which is not directly related to studying at the university.

This to some extent reduced the students' interest in scientific research. However, the potential abilities of the



students from the 60s and today's students, in my opinion, do not differ.

PAC World: What do you think is important for a protection engineer's development in today's world?

V.S.: The almost unlimited opportunities for relay protection improving, which are provided with modern simulation systems, digital microprocessor technologies and new methods of digital signal processing.

PAC World: What do you consider the biggest challenge in your professional career?

V.S.: In the 60-70s a significant problem was an unavailability of an effective simulation tool for transients' studies. Studying of any idea during power system operation was taking up an unacceptably long time - months, sometimes years.

Therefore, in the 80s we developed our own simulation tool for relay protection studies and achieved some success. Today scientists and experts don't have such a problem.

The tasks that we solved during weeks and months can be solved in a few hours with the use of modern simulation systems.

PAC World: Do you think that the fact that the USSR does not exist anymore has an impact on your work as a protection engineer?

V.S.: In the 90s it made some difficulties, nowadays it's mostly behind us.

PAC World: Is there an award that you have received that is the most important to you?

V.S.: To awards... I'm indifferent.

For me the main award are the students, who are not satisfied with what they have achieved and do not stop working. I have such students.

PAC World: What do you consider your biggest personal accomplishment?

V.S.: Rather, children and grandchildren growing up

and justifying my hopes. Also, students who met my expectations

PAC World: What do you think we need to do to attract more young people to our industry?

V.S.: In different countries the situations and the problems are obviously different. In Russia, it is the improvement status and prestige of teaching and scientific work in the universities. The rest of it is a matter of relevant research department.

PAC World: What is the advice that you would give when you are in front of an audience of young people?

V.S.: My first teacher O.V. Lebedev said once that overcurrent protection is inexhaustible as the atom.

I often say to the audience of students and try to demonstrate examples that in the field of relay protection (and in any other fields as well) there are no «certain» things. You have to check it yourself.

Today's students have almost unlimited possibilities that are offered by the modern simulation systems.

PAC World: What do you think about retirement?

V.S.: The differences between before and after reaching the retirement age has not yet felt. I work and teach with pleasure.

PAC World: Do you like to travel and do you have a favorite place to visit?

V.S.: I like. My favorite places are Vladivostok and Baikal.

PAC World: Do you have a hobby or something that you like to do when you are not working?

V.S.: I do not have anything that is called hobby. In the summer I often spend weekends in the woods, and during the winter I like to go skiing. For more than 30 years I was engaged in a volleyball sport team organized by me.

PAC World: What is your favorite form of entertainment?

The tasks that we could solve during weeks and months can be solved in a few hours with the use of modern simulation systems.



My biggest personal accomplishments are my children and grandchildren growing up and justifying my hopes

V.S.: The third hunting - picking mushrooms. At home - the books. Volleyball, billiards. Practically I do not watch TV.

PAC World: **What do you think about the balance between your professional and personal life?**

V.S.: Sometimes it seems that the personal life took less time than it should. But probably I am not able to change this.

PAC World: **Do you have any favorite food?**

V.S.: I was born near the sea. Because of that, my favorite dish is fish, as a rule, a good steak of salmon, trout or walleye.

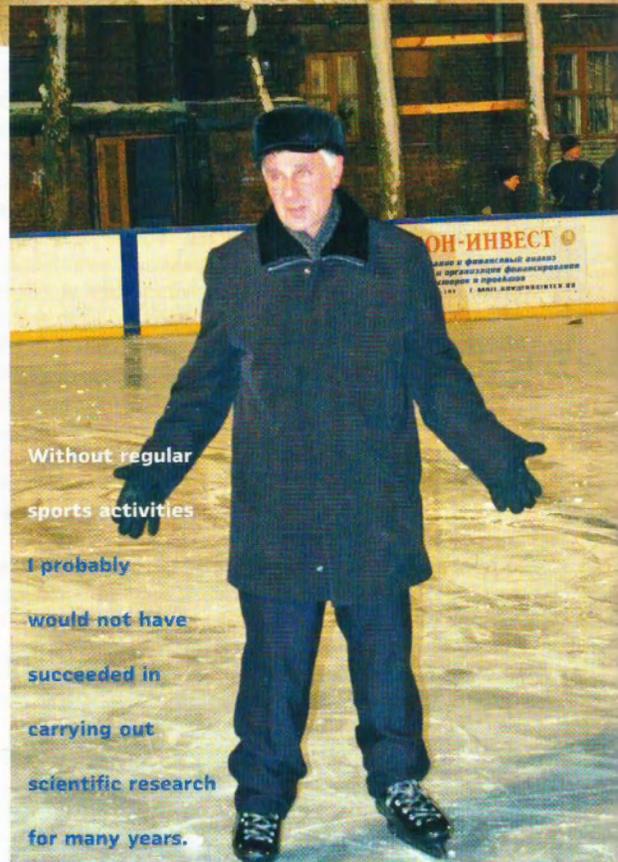
PAC World: **Do you have a motto?**

V.S.: Work hard and endure. The result is sure to be.

PAC World: **Is there a question that we forgot to ask you?**

V.S.: Maybe it's a question about the role that the sport played in my life. Without regular sports activities I probably would not have succeeded in carrying out scientific research for many years.

I also always support when my children, grandchildren and students also find time for sports' activities. ■



Without regular sports activities

I probably would not have succeeded in carrying out scientific research for many years.