

Workshop for Physics teachers by Vladimir Shelest

1 - 3 March, Physikzentrum Bad Honnef

Time	Monday 1 March	Tuesday 2 March	Wednesday 3 March
8.00 - 9.00	Arrival	Breakfast	
9.00 - 10.30		Physics in questions and answers	Selected difficult themes of school Physics
10.30 - 11.00		Coffee break	
11.00 - 12.30		Selected difficult themes of school Physics	Physics teaching through students' research projects
12.45		Lunch	
14.00 - 15.30	Pedagogics from a physicist point of view	Physics teaching through students' research projects	Physics teaching through students' research projects
15.30 - 16.00	Coffee break		Departure
16.00 - 17.30	Physics in questions and answers	Physics in questions and answers	
18.00	Supper		
19.30 - 21.00	Selected difficult themes of school Physics	Selected difficult themes of school Physics	

Vladimir Shelest is a theoretical physicist, a member of Executive Committee of United Physical Society of Russian Federation, a teacher with more than 20-year experience, a head of "Students' Scientific Laboratory" (Novosibirsk Center for gifted children), an author of books "Non-typical physical problems" and "Physics in questions and answers", was awarded the Golden Medal "Public Recognition" for the achievements in education.

Physics in questions and answers

One of a teacher's problems is the variety of his students' abilities, motivation, etc. In every class there is a "head" and a "tail". How to formulate a question which will be interesting for the "tail" and not boring for the "head"? Our course is devoted to problems that can be suggested in a kindergarten and in the Cavendish Laboratory. These problems have a lot of answers on different levels of complexity, which leads to a deeper understanding of the problem and makes it interesting to everyone. We shall train in creating and practical using of such problems.

Physics teaching through students' research projects

One of a teacher's problems is how to increase a students' motivation. Our approach is based on the fact that most of the students, independently of their age and initial training, usually prefer making their own experimental research to listening to lectures. Our course is devoted to Physics teaching by means of students' research projects. We shall train in creating and practical using of such projects.

Selected difficult themes of school Physics

Some school physics themes are difficult for teaching. Our course is devoted to detailed discussion of such difficult themes, selected by the course participants.