Vladimir Šips (1928 – 2003)

Vladimir Šips in memoriam

This issue of the journal FIZIKA A (Zagreb) is dedicated to the memory of Professor Vladimir Šips.[1]

Vladimir Šips, together with Ivan Supek, founded the theoretical solid state physics in Croatia. From 1966 on, Vladimir Šips lead the Theoretical Solid State Group in the "Ruđer Bošković Institute" which seeded the research work in this field in Zagreb and in some other centres. Other researchers independently started work in some branches of theoretical solid state physics, so presently several respectable groups are active in Zagreb only.

Main interest in the research work of Vladimir Šips was in the theory of metals, especially the collective degrees of freedom of the electron gas with Coulomb interaction included. He used various methods in his work, the Bohm-Pines approach, canonical transformations, dielectric formalism and random phase approximation, and studied properties of plasmon oscillations (dispersion and attenuation), and polarizability and elastic properties of electron gas. He made a generalization by considering multicomponent electron plasma, calculated properties of other acoustic branches and investigated temperature dependence of these effects. Professor Šips also studied the effects of exchange terms and of other terms of higher order to polarizability in the random phase approximation. Further, he studied the classical limit of collective oscillations and applied these concepts to the problem of plasmon-plasmon interaction of small metalic crystals. His work has been recognized by many researchers in the world as may be seen from citations in published articles.

From 1979, for over 18 years, Vladimir Šips was Publishing Editor of the journal Fizika (Zagreb) and of the succeeding journals Fizika A (Zagreb) and Fizika B (Zagreb). After his withdrawal, he continued to collaborate as Lector of English until a couple of months before his death in 2003. He made a huge effort to improve the journals, both in content and in technical appearance. His work and engagement was crucial in some critical periods when the existence of the journals was at stake.

[1]The physics community in Croatia and the editors are grateful to all authors who dedicated their scientific articles in this issue to the memory of Professor Vladimir Šips.

Vladimir Šips was born on 19 November 1928 in Đakovo, Croatia. He graduated physics in 1954 at the Faculty of Science and Mathematics of the Zagreb University, worked in a secondary school until 1957 when he joined Institute "R. Bošković" to work in the theoretical solid state physics. He defended his Ph.D. thesis "A Contribution to the Theory of Collective Motion of Electrons and Ions in Metals" in 1963. He was elected to the position of scientific collaborator in 1965 and as the leader of the Theoretical Solid State Group in 1966 when several young graduates were already active in this field in IRB. As part-time collaborator, he was also active in the university teaching, giving both undergraduate and graduate courses. In 1970 he was promoted to the position Assistant Professor and in 1973 to the position Associate Professor at the Faculty of Science and Mathematics. In 1976 he joined the Faculty of Science and Mathematics of the Zagreb University as full-time employee, but continued his research work at the Institute "R. Bošković" with his previous collaborators for many years. He was promoted to the position of full Professor in 1992. He retired in 1999 after 42 years of intensive university teaching. At the Faculty of Science and Mathematics of the Zagreb University, he introduced and taught many undergraduate courses: Introduction to Atomic Physics, Introduction to the Theory of Many-Particle Physics, Introduction to the Theoretical Solid State Physics, Statistical Physics, Selected Themes in Physics, Solid State Physics I and II, Statistical Mechanics and Theoretical Physics I and II. For almost 20 years he taught the courses Statistical Mechanics and Introduction to the Solid State Physics at the University of Osijek. He was also very much involved in the teaching of graduate courses: for many years at the Faculty of Science and Mathematics the course Solid State Physics I, and also other courses at the Faculty of Mechanical Engineering and the Technological Faculty of the Zagreb University, and some courses at the University of Ljubljana, Slovenia, and University of Sarajevo and University of Banja Luka in Bosnia and Hercegovina. The heavy teaching load impeded his research work to a considerable extent.

The organisational activities of Vladimir Šips were also considerable. Besides the mentioned leadership of the Theoretical Solid State Group, he was a member of the Managing Board, of the Council and of the Scientific Committee of the Institute "R. Bošković", a member of the Council of the Institute of Physics and a member of the Council of the Faculty of Science and Mathematics. Further, he was the Head of the Department of Physics in 1975/76. He was also the Head of

the School for Secondary-School Teachers.

Vladimir Šips will be remembered as a man who greatly advanced both research and university teaching in Croatia and in some neighbouring countries. He was a hard-working person, very kind, always ready to help, very just to his students and always trying to improve their knowledge. The Croatian physics community, in particular his close friends, but also many others, miss him very much.

S. Barišić, Guest Editor
K. Ilakovac, Editor

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