

## CHRONICLES

### THE INTERNATIONAL CENTER OF THE ACADEMIES OF SCIENCES OF THE SOCIALIST COUNTRIES FOR TRAINING IN HEAT AND MASS TRANSFER

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On November 21, 1973, an agreement was signed in Minsk to set up this Center jointly by the Academy of Sciences of the Belorussian SSR, the Bulgarian Academy of Sciences, the Hungarian Academy of Sciences, the Academy of Science of the German Democratic Republic, the Academy of Sciences of the Mongolian Peoples' Republic, the Polish Academy of Sciences, and the Czechoslovakian Academy of Sciences.

The Center will carry out its tasks by organizing short and long specialized courses, training schemes, seminars, symposia, summer schools, colloquia, scientific conferences, and other meetings of specialists, while providing also for collaboration between the teams at the Institute itself and specialists from the Socialist countries.

This Center is the third joint organization of the Academy of Sciences of the Socialist countries. The first was set up in Wroclaw in June, 1969, namely the International Laboratory for Strong Magnetic Fields and Low Temperatures. In January, 1973, the Stefan Banack International Mathematical Center for Scientific Training was opened in Warsaw.

This Center for training in heat and mass transfer in Minsk is a further practical step in developing this promising form of international collaboration within the Socialist countries.

Heat and mass transfer as a separate discipline was first formulated by A. V. Lykov, Academician of the Belorussian Academy of Sciences, an outstanding scientist and notable worker, who for many years headed the Institute of Heat and Mass Transfer of the Belorussian Academy of Sciences.

This topic is now accepted here and abroad as a major topic in modern science and technology; advances in the science and engineering of heat and mass transfer allow one to design highly efficient equipment and fast technical processes.

This Institute occupies the leading position in the Soviet Union in this area; it has provided the lead in the Soviet Union in the area of heat and mass transfer in engineering processes. A major part is played by All-Union conferences on heat and mass transfer, which have taken on the character of international ones. The Institute also houses the following: the Editorial Board of the All-Union Journal of Engineering Physics, the USSR Editors of the International Journal of Heat and Mass Transfer (Pergamon Press, Ltd., London), and the Soviet Editors of the American journal Heat Transfer, Soviet Research (published by Scripta Technica, Inc., USA).

The Institute carries out various forms of collaboration with foreign scientists: agreements on the exchange of scientific information, exchanges of leading scientists to present lectures and provide advice, long-term study exchanges, and researches on a general agreed plan. The closest relationships are those between institute and various scientific organizations in the Socialist countries, in particular the Institute of Thermomechanics of the Czechoslovakian Academy of Sciences, the Institute of Mathematics and Mechanics of the Academy of Sciences of the German Democratic Republic, the State

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Engineering Research Institute of Czechoslovakia, the Institute of Mathematics and Mechanics of the Bulgarian Academy of Sciences, and the Institute of Physics and Technology of the Academy of Sciences of the Mongolian Peoples Republic.

The Center was founded to strengthen these connections, make them permanent, and also combine the forces of specialists in heat and mass transfer, which is particularly important for the Socialist countries, which are interested in international division of labor in areas of science. Young scientific workers coming to the Center will be able to receive training in the laboratories of the Institute and to use the equipment and plant at the Institute for a variety of researches, thereby acquiring the necessary qualifications with a considerable economy in time and expense.

The laboratories of the Center will have their own equipment for research purposes, with test beds for research on low-temperature plasma, and also, ultimately equipment at present under installation for research on thermal diffusion in gases and liquids as well as heat and mass transfer in boiler tubes. The lecture and reading rooms of the center are also being appropriately equipped.

The Center will form an integral part of the Institute, and the Institute will be consulted in decisions on all legal and financial aspects of the Center, although the direction of the scientific activity of the center will be in the hands of a scientific council.

The scientific council is set up by the Academy of Sciences signatory to the agreement for the Center, with the purpose of agreed definition of the activities of the Center, and the research and teaching plans. The Council will have one representative from each of the academies of sciences. The President of the Scientific Council will be selected in turn from the members of the Council, with a period of office of two years.

The following members have been named to the Council: A. V. Lykov (Academy of Sciences of the Belorussian SSR), the President; Professor D. Elenkov (Bulgaria), Professor T. Blikle (Hungary), Professor W. Zwick (German Democratic Republic), Ganzhaagiin Ayushav (Mongolian Peoples Republic), Academician J. Ciborowski (Poland), and Professor M. Pichal (Czechoslovakia). Dr. V. A. Borodulya (USSR), Director of the Center, is an ex-officio member of the Council.

The first meeting of the Scientific Council was held on March 26, 1974 in Minsk; the President of the Council, at the suggestion of the President of the Polish Academy of Sciences, Ciborowski, was chosen unanimously as A. V. Lykov.

The Scientific Council lays down the main lines and topics in the work of the Center, confirms the forward plan, detailed working programs, and the organizational committees for individual topics, while also considering and confirming the annual reports of the activity of the center, and so on.

The Director is in charge of the day-to-day activity of the Center, and he is simultaneously deputy for the Director of the Institute of Heat and Mass Transfer of the Belorussian Academy of Sciences.

Academician Jaroslav Kozesnik from Czechoslovakia said when signing the agreement that the creation of the international center will be of great significance for further advance in international scientific collaboration in one of the major areas of modern science and technology; it will accelerate research in this area in the national academies. Our Belorussian colleagues have a rich scientific and industrial base.

The considerable interest in the Center is clear from the fact that the Institute has received numerous requests for information about the courses held by the Center.

The official founding of the Center was preceded by a summer school on heat and mass transfer in capillary and porous bodies in gas flows in the presence of phase and chemical changes; this was organized by the Institute and held in Minsk from May 15 to June 4, 1972; 17 people participated in the school, including 13 young scientists from Bulgaria, the German Democratic Republic, Poland, Czechoslovakia, and Yugoslavia.

It must be emphasized, however, that different from the International Center of Heat and Mass Transfer set up in 1968, which is concerned in the main with organizing seminars and summer schools, and in whose work the only Socialist countries participating are the USSR and Yugoslavia, the Center at the Institute of Heat and Mass Transfer from the very beginning has not been restricted merely to this kind of activity.

The 1974 plans of the Center include an international school on the following topic: mathematical aspects of heat and mass transfer; there is also to be a three-month fall specialized course on transport phenomena in capillary-porous bodies in low-temperature boiler tubes and in drying moist materials; this will involve the participation of specialists from the Socialist countries, who will be able to perform experimental studies in the laboratories of the Institute over a wide range of topics.

There were 27 young scientists from Moscow, Leningrad, the Ukraine, Moldavia, Latvia, and Estonia at the school held in Minsk from June 4-19, 1974, including 18 young scientists from all countries who signed the agreement on the Center. Most of these were PhD level.

The Vice-President of the Academy of Sciences of the Belorussian SSR, A. S. Makhnach, opened the school with an address; then Academician A. V. Lykov gave a paper on current topics in heat and mass transfer. A series of lectures was then given on numerical methods in handling combined heat and mass transfer by Professor L. A. Chudov (Moscow), Dr. V. I. Polezhaev (Moscow), and Dr. E. F. Nogotov (Minsk).

Professor T. L. Perel'man (Minsk) also presented lectures on conjugate problems in convective heat and mass transfer and on asymptotic methods in solving a class of nonlinear integrodifferential equations involved in heat and mass transfer, and also in chemical kinetics.

Professor A. A. Gukhman (Moscow) presented lectures on applications of the modern theory of similarity in research on heat and mass transfer, while Professor A. P. Prudnikov (Moscow) presented lectures on operational methods in solving differential equations. B. M. Smol'skii (Minsk), Associate Member of the Academy of Sciences of the Belorussian SSR, presented lectures on research on heat and mass transfer in the presence of phase changes and chemical reactions.

Much interest was aroused by the lectures by Professor M. Mikhilailov from Bulgaria on analytical methods of solving generalized transport equations and by Dr. H. Hajewsky from the German Democratic Republic on new methods of solving nonlinear problems in thermal conduction.

Individual current topics in the theory of heat and mass transfer were dealt with in lectures by Dr. Yu. P. Gupalo (Moscow), A. A. Baranov, V. L. Kolpashchikov, N. V. Pavlyukevich (Minsk), and Yu. A. Sokovishin (Leningrad).

The participants in the school were also able to present results from their own work. Examples were presentations by Dr. H. Boyadzhiev (Bulgaria), V. S. Novikov (Kiev), and L. Laskowskii (Poland).

The lectures were accompanied by a program of visits to the laboratories in the Institute, discussions with specialists at the Institute, and discussions with other members of the school.

It was generally agreed by the participants that the International School represented a high level and a first step in the activity of the Center, with good promise for its future success.