SYMMETRIC NEWS

Reflections on the first ISIS-Symmetry Symposium (Budapest 1989)

The monthly scientific program *Ochevidnoe, neveroyatnoe* [Obvious, Incredible] of the Soviet Central Television, hosted by the well-known scholar Professor Sergei P. Kapitsa, devoted two complete programs to the symposium in Budapest. It is really unusual in the history of this very popular television program, watched by tens of millions, to give so much time to one symposium. Moreover, the program was repeated twice, making it available for the audience of all three main channels (three times two hours on symmetry!). The majority of the program was shot in Budapest at the conference center, in various lecture rooms, at the exhibition in the Hungarian National Gallery, and was extended by comments from the studio by local experts. The program is also available on video-cassette. Please contact Mr. Vladimir M. Vozchikov at the Soviet Central Television, Moscow, Ostankino.

There are also some reviews of the same symposium, among others, in the *Japanese Scientific American* by Yasushi Kajikawa, in *Leonardo* by Arthur L. Loeb, in *Nauka Urala* [Ural's Science] by Nicolai P. Yushkin, and in *Polyaisthesis* by Hanan Bruen; in Japanese, English, Russian, and German, respectively. We kindly ask of our members to send a copy of any further review of this symposium, because we would like to compile a bibliography of these items for the convenience of the membership. Moreover, we would like to learn from the critical remarks.

The Office of ISIS-Symmetry in Budapest has some extra copies of the proceedings (extended abstracts [see on the back cover]) of the Budapest symposium, (*Symmetry of Structure*, 2 volumes, 656 pp.). The price of the complete set is US$15.00 for members, US$30.00 for others (please add US$4.00 for postage).

ISIS-Symmetry flyers and leaflets

Board Members Mary Harris, Peter Klein, and Janusz Rębielak made available flyers on ISIS-Symmetry in their countries. Mary Harris uses a "symmetric" play on words *ISIS IS*. Klein's and Rębielak's flyers are in German and Polish, respectively. Although the Society's only official language is English, flyers or leaflets in other languages are also welcomed. These may significantly help the regional activities, and we encourage other Regional or Project Chairpersons to follow these examples. Obviously, some of the regional meetings can be conducted in local languages.

Symposium on Symmetry, Tempe, Arizona, April 21, 1990

Bert Zaslow (Department of Chemistry, Arizona State University), who is the Chairperson of Pattern Mathematics of ISIS-Symmetry, organized a mini-symposium during the 34th Annual Meeting of the Arizona-Nevada Academy of Science. The program – running for the whole afternoon (1:45-5:00 p.m.) – included six lectures:

- D. Burnstein: Gravity, symmetry and asymmetry in astronomy
- A. Swimmer: Symmetric Pfaffians
- B. Zaslow: The geometric and color symmetry of Pracas decorations
- I.L. Wolf: Global precedence in point group symmetry patterns
- K. Balasubramanian: Symmetry in East Indian temples and architectures
- D.J. Pinkava: Phyllotaxy and symmetry

The abstracts of all these lectures (and also of a seventh on "Quasicrystals" by D.F. Nachman, which was not given) are available in the proceedings: *Journal of the Arizona-Nevada Academy of Science*, 25 (1990), Supplement, 23-25. Although many events took place at the same time, the President of the Academy spent the afternoon at this symposium. The relaxed atmosphere helped the discussions. Bert Zaslow, who chaired the whole meeting, distributed copies of ISIS-Symmetry leaflets to interested persons.

Symmetry Seminars in Poland

The Polish Branch of ISIS-Symmetry decided to organize seminars headed by Board Members Janusz Rębielak and Jan Mozrzymas. Some of the papers presented there will be published in this Quarterly, while a brief description of the programs will be available in this section. The first meeting of the seminar was held at the Institute of Architecture and Town Planning, Technical University of Wrocław, in April 26, 1990. After a general discussion on goals and activities of the Society, Janusz Rębielak gave a lecture entitled "The construction of symmetric space structures". The student section of the Polish Branch of ISIS-Symmetry is organized by Agnieszka Glura. For more information, please contact Janusz Rębielak, Regional Chairperson (for his address, refer to the list of the Board).

RepTiles and FunTiles

There is a very nice way of encoding periodic tilings in the form of Delaney-Dress symbols, which are finite connected $n+1$ colored graphs with functions defined on their nodes (where n is the dimension of the space being tiled). I have developed a number of computer programs that generate and manipulate the symbols. Using this software, we have solved many types of classification problems concerning tilings of the plane, sphere, hyperbolic plane, and now, even of 3-dimensional space. Andreas Dress has some students working on programs that take Delaney-Dress symbols as input and produce, as output, the pictures of the tilings encoded by the symbols. Two such programs have been completed. One program, called *RepTiles*, written by Olaf Delgado, does periodic tilings of the plane, whereas the other, called *FunTiles*, written by Klaus Westphal, can do tilings of the sphere, hyperbolic plane and the Euclidean plane. To be precise, FunTiles only can draw a fundamental region of the tiling and it indicates how the symmetry group of the tiling is to be applied to the drawn fundamental region.

RepTiles runs on an Atari ST and on Unix using Unix's PLOT routines. We hope to produce an MS-DOS version soon. *FunTiles* runs on MS-DOS and on Unix, again using Unix's PLOT routines. *FunTiles* is very new and not really in the state to be given to other people yet. *RepTiles* is older and more developed. If you are interested, we will gladly send you a copy of either program. (See also the related bibliography in the section *Symmetro-graphy*.)

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