

Workshop Report:

5th Japan–Benelux Workshop on Coding and Information Theory

The 5th Japan–Benelux Workshop on Information Theory was held February 2–4, 1996, in hotel “KKR Miyanoshita” near Hakone, Japan, a nature resort near Tokyo. The workshop was attended by 24 participants from Japan, the Netherlands, Germany, and Russia. The workshop results from good contacts between the Japanese and Benelux scientists, and aims to stimulate exchange of research results and new problems between scientists and engineers working in information theory and coding theory. The 5th workshop was organized by Prof. Te Sun Han, Prof. Kingo Kobayashi, and Prof. Hiroyoshi Morita from the Graduate School of Information Systems, University of Electro-Communications, Tokyo, and Prof. Han Vinck, University of Essen, and was supported by Joint Research Project under the Japanese-German Cooperative Science Program between the Japanese and German science foundations JSPS and DFG.

Previous workshops were held in Eindhoven, the Netherlands (1989), Tokyo, Japan (1992), Essen, Germany (1993), and Eindhoven (1994).

The technical program consisted of 16 papers. Topics ranged from data compression, combinatorics, error control and synchronisation, to theoretical aspects of magnetic recording, chess play move compression, and video compression. Copies of the workshop’s proceedings are available from Prof. H. Morita (morita@is.uec.ac.jp).

The cultural program included an excursion to a famous shrine, where we attended a traditional Japanese feast called “Setsubun”, an annual bean-throwing ceremony to scare the devils at the beginning of each spring. In Ohwaki-dani, the valley of hell, we watched and smelled sulphur springs, caused by volcanic activity. From there, we could perfectly see Mt. Fuji. Another highlight was the accommodation in a Ryokan, a traditional Japanese hotel, where we had an excellent banquet, and enjoyed bathing in a hot spring and sleeping on tatami afterwards.

The 6th Japan–Benelux workshop is scheduled for June 1997, in Germany, and will be held in a region with medieval castles, old cities, and vineyards. For more information, please contact Adriaan van Wijngaarden (adriaan@exp-math.uni-essen.de).

List of presentations

N. Suehiro (Univ. of Tsukuba), "Signal detection in approximately synchronized CDMA system with good information transmission rate without co-channel interference"

K.A.S. Immink and L. Pátrovics (Philips, Eindhoven), "Performance assessment of DC-free multiple-choice codes"

T. Kawabata (U.E.C.), "An algorithm to compute the permanent of rectangular matrix"

A.J. Han Vinck (Univ. of Essen), "Information theoretical aspects of MFSK frequency hopping"

S. Miyake (NTT) and F. Kanaya (Shonan Inst. of Tech.), "Source-channel coding theorem with/without fidelity criterion for nonstationary/nonergodic Process"

F. Kanaya (Shonan Inst. of Tech.), "An almost sure recurrence theorem with distortion for stationary ergodic sources"

B. Balkenhol (Univ. of Bielefeld), "Data compression using deterministic experts"

J. Muramatsu (NTT) and F. Kanaya (Shonan Inst. of Tech.), "A universal data compression with common information"

P.H.N. de With and M. Mirea (Philips, Eindhoven), "A comparison between Huffman and arithmetic coding for video compression"

H. Yamamoto (Univ. of Tokyo), "Source coding theory for a triangular communication system"

R. Ahlswede (Univ. of Bielefeld) and K. Kobayashi (UEC), "Whitney numbers of multisets"

U. Tamm (Univ. of Bielefeld), "The influence of memory on creating order"

M. Hoshi (U.E.C.) and T.S. Han (U.E.C.), "Random number generation and arithmetic coding"

M. Kurihara and S. Sakata (U.E.C.), "A fast parallel decoding algorithm for general one-point AG codes with a systolic architecture"

A.J. van Wijngaarden (Univ. of Essen) and T.J. Willink (CRC, Ottawa), "On the properties of distributed marker sequences for frame synchronisation"

H. Morita (UEC) and A.J. van Wijngaarden (Univ. of Essen), "On coding algorithms for extended prefix-synchronized codes"

Caption for Photo:

Workshop Participants: From left to right: Front row: Peter de With, Han Vinck, Te Sun Han, K.A.S. Immink; 2nd row, 3 far left: Hirosuke Yamamoto, Tsutomu Kawabata, Masazumi Kurihara; 2nd row, 3 far right: Mamoru Hoshi, Shigeki Miyake, Jun Muramatsu; 3rd row: Takeshi Hashimoto, Shuichi Itoh, Kingo Kobayashi, Adriaan van Wijngaarden, Hiroki Koga, Ulrich Tamm, Shojiro Sakata, Bernhard Balkenhol, Fumio Kanaya; Back row: Hiroyoshi Morita, Naoki Suehiro; Not shown: Suguro Arimoto, Kazuhiko Yamaguchi, Alexander Kuznetsov