

A Note to d-maps

Lubica Valášková
Slovak University of Technology, Bratislava
Valaskova@math.sk

d-maps are a map on an orthomodular lattice, which correspond to measure of symmetric difference of random events on a probability space.

The motivation to study d-maps is well known fact, that for three random variables with known marginal distribution functions the join distribution function need not always exists. We are looking for conditions for existence such extension. In our work, the distribution functions are represented by means of s-maps, maps on an orthomodular lattice, which have been introduced in [1] and studied in [2]-[4]. Therefore we deal with conditions for extension of 2-dimensional s-map to 3-dimensional s-map, where d-maps play an important role.

Acknowledgment This work was supported by Science and Technology Assistance Agency under the contract No. APVV-0375-06, VEGA-1/0373/08, VEGA 1/4024/07

References

- [1] Nánásiová O., Map for Simultaneous Measurements for a Quantum Logic, Int. Journ. of Theor. Phys., Vol. 42, No. 8, 1889-1903, (2003).
- [2] Nánásiová O., Khrennikov A., Representation theorem for observables on a quantum system, Int. J. Theoret. Phys. **45** (2006), 481-494.
- [3] Nánásiová O., Khrennikov A., Compatibility and marginality, Int. J. Theoret. Phys. **46** (2007), 1083-1095.
- [4] Nánásiová O., Valášková Maps on a quantum logic, Forum Stat. Slov., ISSN 1336-7420, (2007), 178-184

Address: Dept. of Math., Fac. of Civil Eng., Slovak Univ.of Technology, Radlinského 11, 813 68 Bratislava, Slovakia