عنوان مقاله:

A COMMON FRAMEWORK FOR LATTICE-VALUED, PROBABILISTIC AND APPROACH UNIFORM (CONVERGENCE) SPACES

نویسنده:

Gunther Jager - *School of Mechanical Engineering, University of Applied Sciences Stralsund, ۱۸۴۳۵ Stralsund, Germany*

خلاصه مقاله:

We develop a general framework for various lattice-valued, probabilistic and approach uniform convergence spaces. To this end, we use the concept of s-stratified LM-filter, where L and M are suitable frames. A stratified LMN-uniform convergence tower is then a family of structures indexed by a quantale N. For different choices of L,M and N we obtain the lattice-valued, probabilistic and approach uniform convergence spaces as examples. We show that the resulting category sLMN-UCTS is topological, well-fibred and Cartesian closed. We furthermore define stratified LMN-uniform tower spaces and show that the category of these spaces is isomorphic to the subcategory of stratified LMN-principal uniform convergence tower spaces. Finally we study the underlying stratified LMN-convergence tower spaces.

کلمات کلیدی:

Stratified lattice-valued uniformity, Stratified lattice-valued uniform convergence space, Probabilistic uniform convergence space, Approach uniform convergence space, Stratified LM-filter

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