<table>
<thead>
<tr>
<th>項目</th>
<th>内容</th>
</tr>
</thead>
<tbody>
<tr>
<td>タイトル</td>
<td>エルゴード理論とその周辺を論じた SHIMANO, TAKASHI</td>
</tr>
<tr>
<td>著者</td>
<td>SHIMANO, TAKASHI</td>
</tr>
<tr>
<td>引用</td>
<td>数理解析研究所講究録 1974, 204: 59-61</td>
</tr>
<tr>
<td>発行日</td>
<td>1974-03</td>
</tr>
<tr>
<td>URL</td>
<td><a href="http://hdl.handle.net/2433/105138">http://hdl.handle.net/2433/105138</a></td>
</tr>
<tr>
<td>型式</td>
<td>Departmental Bulletin Paper</td>
</tr>
<tr>
<td>ページ</td>
<td>publisher</td>
</tr>
</tbody>
</table>

Kyoto University
The problem of inverse of flow

Takashi Shimano (Tohoku Univ.)

This problem is particularly interesting for Kolmogorov systems. Namely is the inverse also K-system?

In the case of discrete parameter, i.e. K-automorphism, it is known by the use of an entropical property and it is clear that Bernoulli shifts, a sub-class of K-systems, are isomorphic to the inverses.

In [ ], Totoki defined the following class of flows of special type:

Special flows constructed under
(i) a base automorphism is Bernoulli,
(ii) a ceiling function has values which depend on zero-th coordinate
of base Bernoulli shift
and showed that the flow is $K$-system if
and only if the ceiling function has not
lattice distribution. Ornstein showed that
these flows are Bernoulli flows in [ ].

About this class, we can construct an
isomorphism between the original one and the
inverse and then the problem is solved.

But, moreover, Ornstein proved that all
the Bernoulli flows (normalized) are
mutually isomorphic in [ ]. Then our problem
has been answered in the affirmative and
in an strong sense for Bernoulli flows.
We have never known the answer for
$K$-systems in the case of continuous parameter
but for $K$-automorphisms the isomorphy fails
(see [ ]) contrary to Smordinsky's conjecture.

We report the circumstances using some
simple examples.
References


