15th INTERNATIONAL CONFERENCE
*Dynamical Systems — Theory and Applications*
December 2-5, 2019. Lodz, POLAND.

DSTA 2019

paper id: BIF107

# Final state sensitivity of intermingled basins

**Takehiko Horita**

*Abstract*: Final sensitivity of intermingled basins in a analytically tractable system is considered. Under a certain scaling assumption, a modified version of the external capacity dimension is introduced, which is connected with the uncertainty exponent of the basins. The dimension plays a similar role as the capacity dimension of the basin boundary in the case of basins with fractal basin boundaries. The scaling assumption is confirmed on the basis of a multifractal analysis by introducing local singularity exponent of the basins and its spectrum. It is shown that the left endpoint value of the singularity spectrum determines the uncertainty exponent of the basins.

---

[1)] Takehiko Horita, Professor: Osaka Prefecture University, 1-1 Gakuencho, Sakai, 599-8531, Japan (JP), horita@ms.osakafu-u.ac.jp , the author presented this contribution at the conference in the special session: "A special session dedicated to Prof. Miguel A.F. Sanjuán on the occasion of the celebration of his 60th anniversary" organized by J. Awrejcewicz.