Document details

‹ Back to results | 1 of 1

Export Download Print E-mail Save to PDF Add to List More... ›

Full Text View at Publisher

AIP Conference Proceedings
Volume 2184, 4 December 2019, Article number 020001
1st International Conference on Mathematical Sciences and Technology 2018: Innovative Technologies for Mathematics and Mathematics for Technological Innovation, MathTech 2018; Penang; Malaysia; 10 December 2018 through 12 December 2018; Code 155612

Dynamics of Potts-Bethe mapping of degree four on â, $š_5$ (Conference Paper)

Ahmad, M.A.K.[a], Pah, C.H.[a], Saburov, M.[b]

[a]Department of Computational and Theoretical Sciences, International Islamic University Malaysia, Kuantan, Pahang, 25200, Malaysia
[b]Mathematics Department, College of Engineering and Technology, American University of the Middle East, Kuwait

Abstract

View references (21)

We give the full descriptions of the dynamical behaviour of the Potts-Bethe mapping of degree four on â, $š_5$. For a, b -, $š_5$, the Potts-Bethe mapping is written as follows fa,b(x)=(ax+bx+a+b-1)4.(1) When $|a - 1|_5 < |b + 1|_5 < 1$, there exists a subsystem (¥, $f_{a,b}$) that is topologically conjugate to the chaotic full shift dynamics on four symbols. We also show that for any initial point x-, š5\(J--j=0∞fa,b-j{ 1-a-b }), the trajectory of the Potts-Bethe mapping converges to a unique attracting fixed point. © 2019 Author(s).

SciVal Topic Prominence

Topic: Gravitation | P-adic | P-adic Gibbs

Prominence percentile: 90.325

Funding details

Funding sponsor	Funding number	Acronym
Labex Bézout		
Ministry of Higher Education, Malaysia	FRGS17-027-0593	MOHE

Funding text

The first author (M.A.K. Ahmad) is grateful to Embassy of France in Malaysia and Labex Bézout for the financial support of his Ph.D at LAMA, Université Paris-Est Créteil, France. The first and second authors (M.A.K Ahmad and C.H. Pah) are supported by the MOHE grant FRGS17-027-0593.

ISSN: 0094243X
ISBN: 978-073541931-5
DOI: 10.1063/1.5136355
Document Type: Conference Paper