

Bingbing Feng

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Research Interests

Chaos: Nonlinear Dynamics, Complex Networks

Vision: Visual Simultaneous Localization and Mapping

Speech: Speech Recognition, Speech Enhancement, Keyword Spotting

Publications

1. Chengqing Li (supervisor), **Bingbing Feng**, Shujun Li, Jürgen Kurths, Guanrong Chen, “**Dynamic Analysis of Digital Chaotic Maps via State-Mapping Networks**,” [*IEEE Transactions on Circuits and Systems I: Regular Papers*](#), vol. 66, no. 5, pp. 1–14, 2019
[doi](#) [Latex Source Files](#) [Code](#) **2022 IEEE Guillemin-Cauer Best Paper Award**
2. Chengqing Li (supervisor), Kai Tan, **Bingbing Feng**, Jinhu Lü, “**The graph structure of the generalized discrete Arnold Cat map**,” [*IEEE Transactions on Computers*](#), vol. 71, no. 2, pp. 364–377, 2022
[doi](#) [Latex Source Files](#) **ESI Highly Cited Paper**
3. Chengqing Li (supervisor), Dongdong Lin, **Bingbing Feng**, Jinhu Lü, Feng Hao, “**Cryptanalysis of a Chaotic Image Encryption Algorithm Based on Information Entropy**,” [*IEEE Access*](#), vol. 6, pp. 75834–75842, 2018
[doi](#) [Latex Source Files](#) [Code](#) **ESI Highly Cited Paper**

Patents

1. Lirong Ye (CEO), **Bingbing Feng**, Danping Luo, “**Door Area Identification Method, Door Area Identification System and Cleaning Robot for Home Environment**,”
CN Patent 110,141,164 (2021) [PDF](#)
2. Danping Luo, **Bingbing Feng**, “**Door Position Identification Method and Mobile Robot**,”
CN Patent 110,269,550 (2021) [PDF](#)

Refereed Journals

IEEE Transactions on Circuits and Systems I: Regular Papers

International Journal of Bifurcation and Chaos, World Scientific

Education

- M.Sc.** in Computer Science and Technology 2015.09 – 2018.06
[Xiangtan University](#), Hunan, China
Supervisor: [Prof. Chengqing Li](#)
Master's Thesis: [Network Analysis of Dynamics of Chaotic Systems in Digital Domain](#)
- B.Sc.** in Computer Science and Technology 2011.09 – 2015.06
[Xiangtan University](#), Hunan, China
Majors: Linear Algebra (100 out of 100)
Mathematical Analysis (90 out of 100)
Probability and Mathematical Statistics (100 out of 100)
Complex Function and Integral Transform (99 out of 100)

Work Experience

- **Algorithm Researcher**
[Silver Star](#), Shenzhen, China 2018.07 – 2019.07
Worked on VSLAM (Visual Simultaneous Localization and Mapping) for floor mopping robot.
- **Speech Recognition Algorithm Researcher**
[eMeet](#), Shenzhen, China 2019.11 – 2022.11
Worked on end-to-end ASR (Automatic Speech Recognition), improving AED (Attention-based Encoder-Decoder) model with chunk-wise self-attention and speech enhancement for robust streaming ASR, developing important production-oriented features ranging from ITN (Inverse Text Normalization), Punctuation Restoration, Contextual Biasing and Endpoint Detection.
[Project](#)

Awards

- 2022 [IEEE Transactions on Circuits and Systems Guillemin-Cauer Best Paper](#)

Skills

- Programming: MATLAB (advanced level), Python (advanced level), C/C++ (advanced level).
- Software: LaTeX, Bash, Git.
- Languages: English (basic level), Chinese (mother tongue), Japanese (basic level).
- Hobbies: Cycling, Reading.