Questions collected by Enhui Shi:

(1) Abstract systems

Question 1.1. Let G be a finitely generated group acting on a compact metric space X distally and minimally. Suppose (X,G) has POTP. Must the action be equicontinuous and X be totally disconnected?

Question 1.2. Determine the structure of minimal/pointwise recurrent expansive group actions on compacta.

Question 1.3. Determine the structure of expansive $\mathbb{Z}^2$-actions on infinite dimensional compacta.

Question 1.4. Describe the topology of a compact metric space X which admits a distal minimal action by a group.

(2) One-dimensional systems

Question 2.1. Describe the structures of minimal sets for amenable group actions on regular curves.

Question 2.2. Does there exist a regular curve admitting a sensitive/expansive nilpotent group action?

Question 2.3. Does Ghys-Margulis alternative hold for group actions on regular curves?

Question 2.4. Must a small group action on a uniquely arcwise connected continuum have a periodic point?

Question 2.5. Does every higher rank lattice action on a uniquely arcwise connected continuum have a periodic point?

Question 2.6. Does every Propty(T) group action on a dendrite/circle have a periodic point?

Question 2.7. Can a group of sub-exp-growth act on a dendroid expansively?

Question 2.8. Can a polycyclic group act on a dendroid expansively?

Question 2.9. Establish the classification theorem for tightly transitive almost minimal nilpotent group actions on $\mathbb{S}^1$.

Question 2.10. Study systematically the dynamics of quasi-graph maps.

(3) Two-dimensional systems

Question 3.1. Does the sphere $\mathbb{S}^2$ admit an expansive $\mathbb{Z}^2$-action?

Question 3.2. Does Ghys-Margulis alternative hold for group actions on the sphere $\mathbb{S}^2$?

Question 3.3. Let G be a higher rank lattice acting distally on $\mathbb{S}^2$. Must this action be finite?

Question 3.4. Does every $\mathbb{Z}^2$ action on $\mathbb{S}^2$ have a periodic point?

Question 3.5. Let f be a distal homeomorphism on the $\mathbb{S}^2$ with the closure of each orbit being totally disconnected. Must f be of finite order?