Quasi-linear transformations, numeration systems and fractals.

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Definition

$A =$ matrix with integer coefficients, $\omega > 0$

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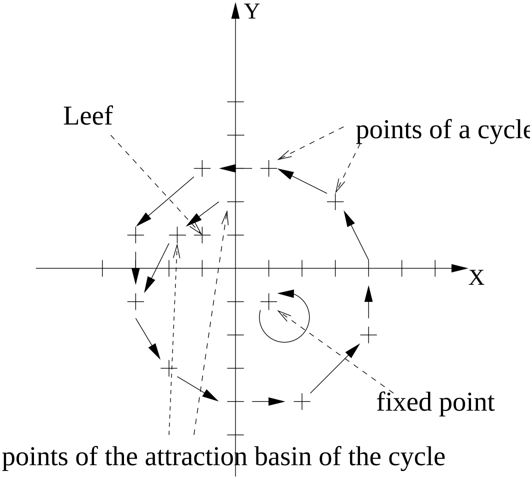
Study :

- Properties of QLTs
- Relation with numeration systems and fractals

Behaviour under iteration

Behaviour of the sequence $X_n = G^n(X)$



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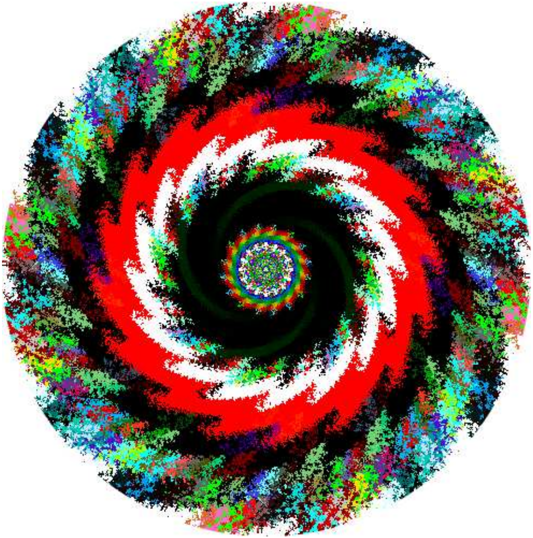

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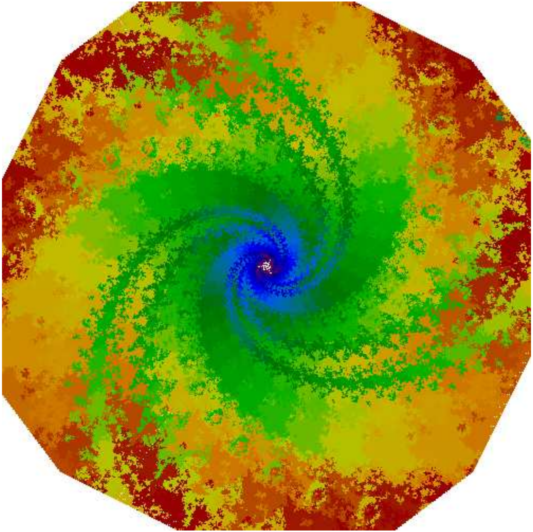

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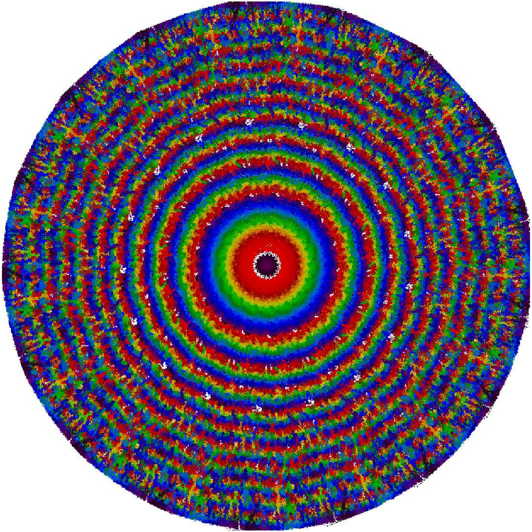

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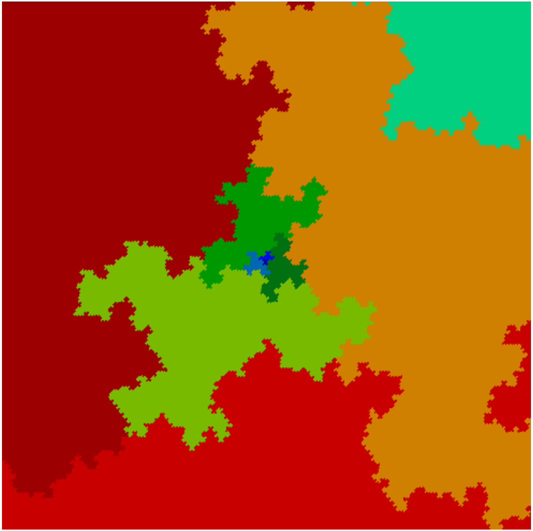
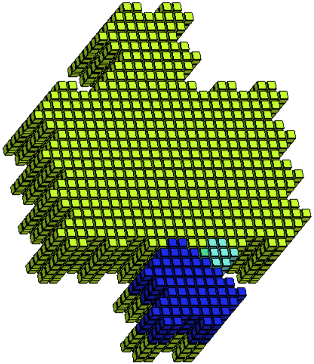
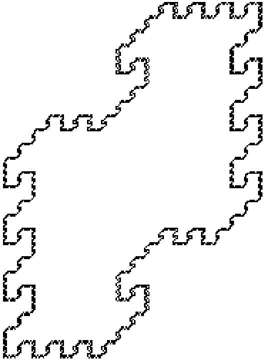


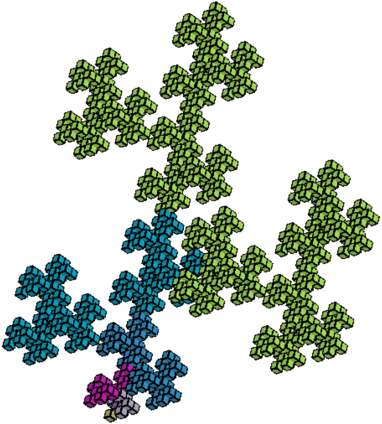
Tiles associated with QLTs

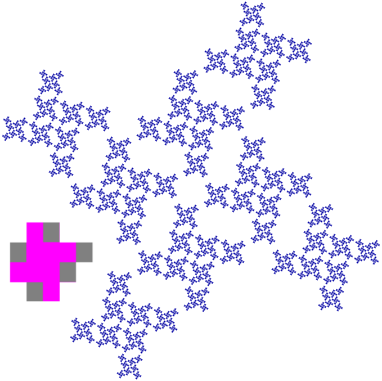
p-tile with index $X \in \mathbb{Z}^n$: $P^p_{G,X} = \{Y \in \mathbb{Z}^n | G^p(Y) = X\}$





Relation with numeration systems.
Fractals associated with QLTs





You are welcome to the poster