

# New trends in holomorphic dynamics III: Going Non-Archimedean

## Salt Lake City Workshop

Charles Favre

CNRS

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## Nested Julia sets I (Qiu-Yang-Yin)

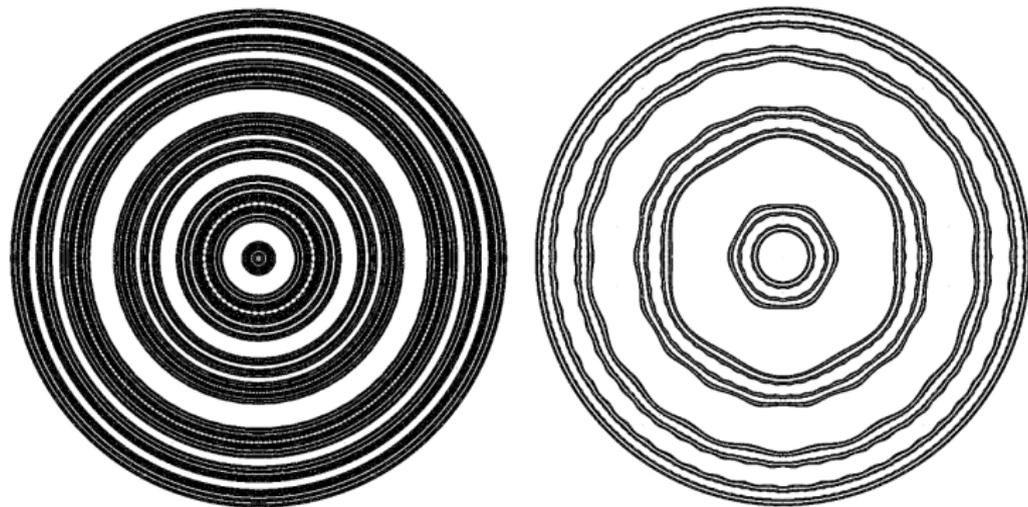


FIGURE 1. The Julia set of  $f_{1,5,5,5,5}$  (left picture), which is not topologically conjugate to that of McMullen map  $g_\eta(z) = z^3 + 0.001/z^3$  (right picture). The two Julia sets are both Cantor circles.

# Nested Julia sets II (Luo)

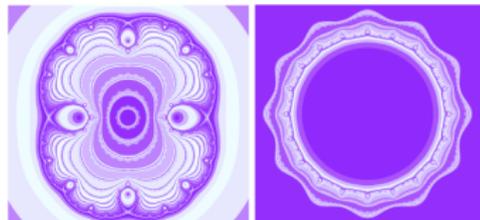


FIGURE 1.1. The Julia set of  $z^2/(1-z^2) + p/z^{10}$  with  $p = 10^{-7}$  on the left, and a zoom of the Julia set near 0 on the right. The Julia set is a Cantor set of closed curves. Any 'buried' closed curve is a circle. Any boundary component of the 'gaps' is a covering of the Julia set of  $z^2 - 1$  (which is conjugate via  $z \mapsto 1/z$  to  $z^2/(1-z^2)$ ).



FIGURE 1.2. The Julia set of  $z^2/(1+cz^2) + p/z^{10}$  with  $p = 10^{-7}$  and  $c$  in the 'rabbit' component of the Mandelbrot set. Each Julia component is either a circle or a covering of the Julia set of the quadratic polynomial  $z^2 + c$ .

# References

- ▶ Luo. Trees, length spectra for rational maps via barycentric extensions and Berkovich spaces.
- ▶ Kiwi. Rescaling limits of complex rational maps.