Yan Mary He

University of Oklahoma

Postdoc, Complex Dynamics Program, MSRI
January 31, 2022

Main Slide

Main Slide

hyperbolic geometry

S

Main Slide

$$\begin{array}{ccc} \text{hyperbolic geometry} & \longrightarrow & \text{Teichmüller space} \\ S & & \rho : \pi_1 S \to \mathrm{PSL}(2, \mathbb{R}) \\ & & \text{Kleinian groups} \\ & & \rho : \pi_1 S \to \mathrm{PSL}(2, \mathbb{C}) \end{array}$$

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hyperbolic geometry $\longrightarrow$	Teichmüller space $\longrightarrow$	higher Teichmüller theory
S	$\rho : \pi_1 S \to \mathrm{PSL}(2, \mathbb{R})$	$\rho : \pi_1 S \to \mathrm{PGL}(n, \mathbb{R})$
	Kleinian groups	$\rho : \pi_1 S \to \mathrm{PGL}(n, \mathbb{C})$
	$\rho : \pi_1 S \to \mathrm{PSL}(2, \mathbb{C})$	$n \geq 3$

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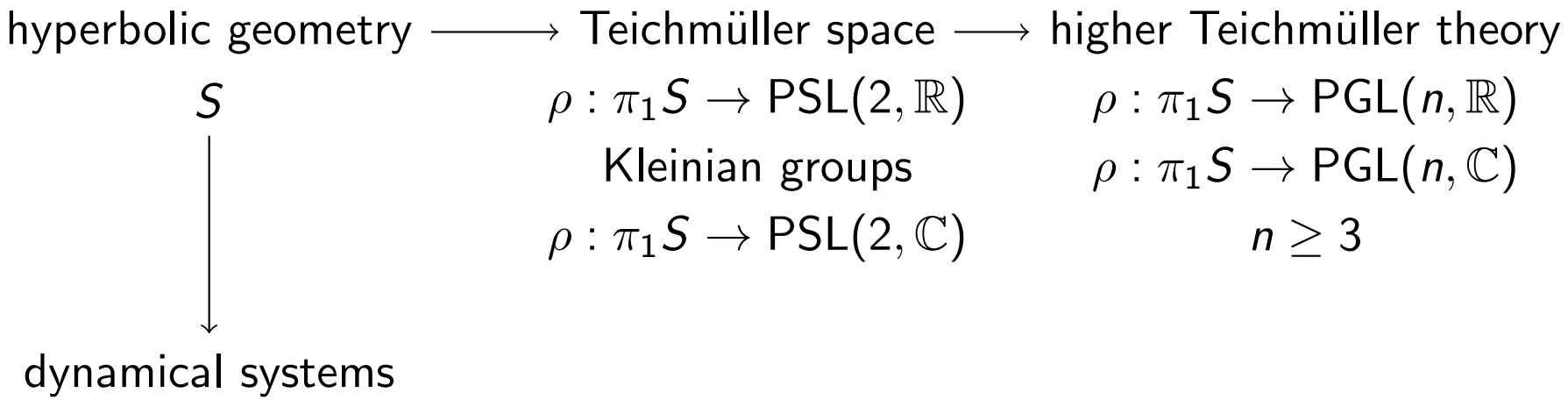
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Teichmüller space
higher Teichmüller theory
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$n \geq 3$
dynamical systems

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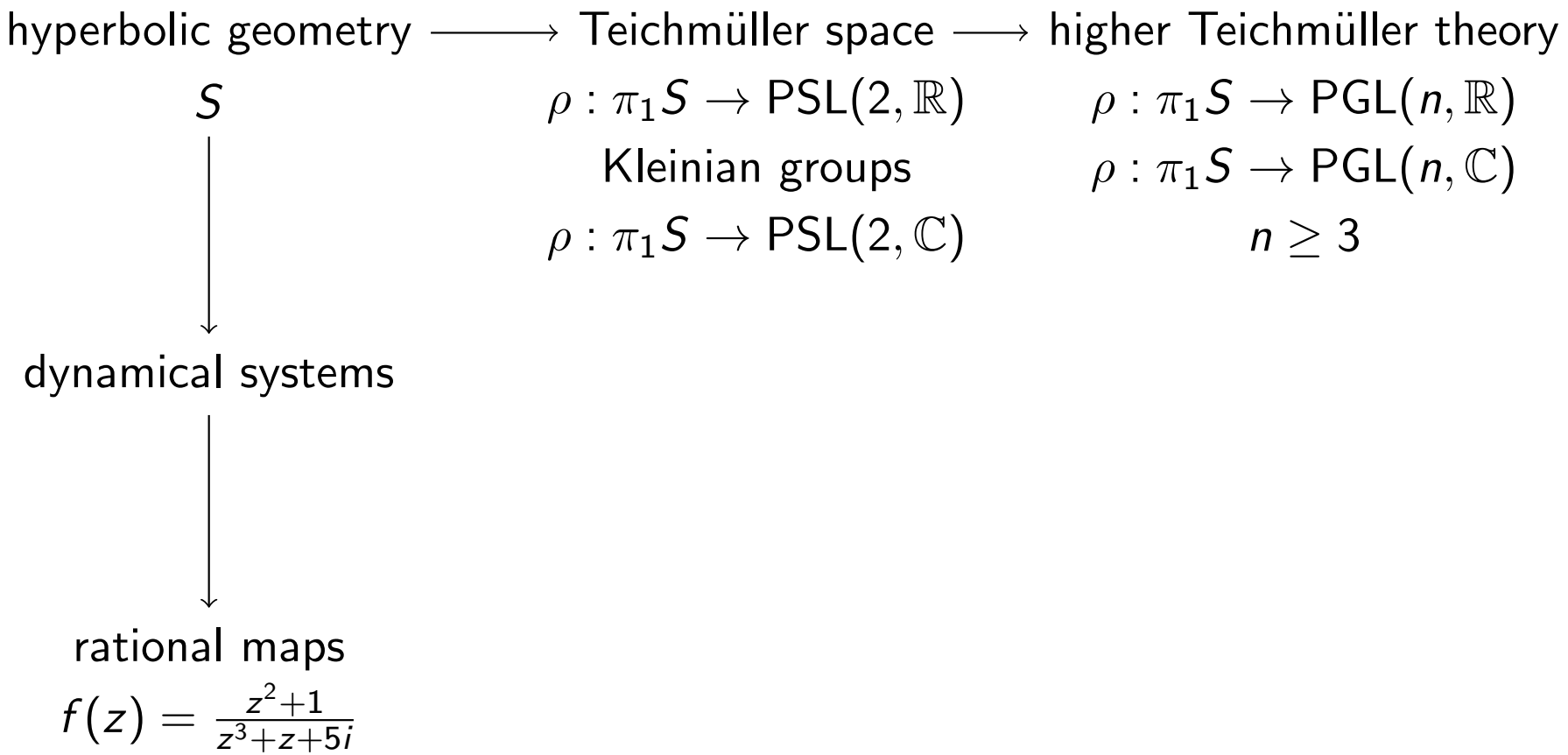
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dynamical systems
rational maps
$f(z) = \frac{z^2+1}{z^3+z+5i}$

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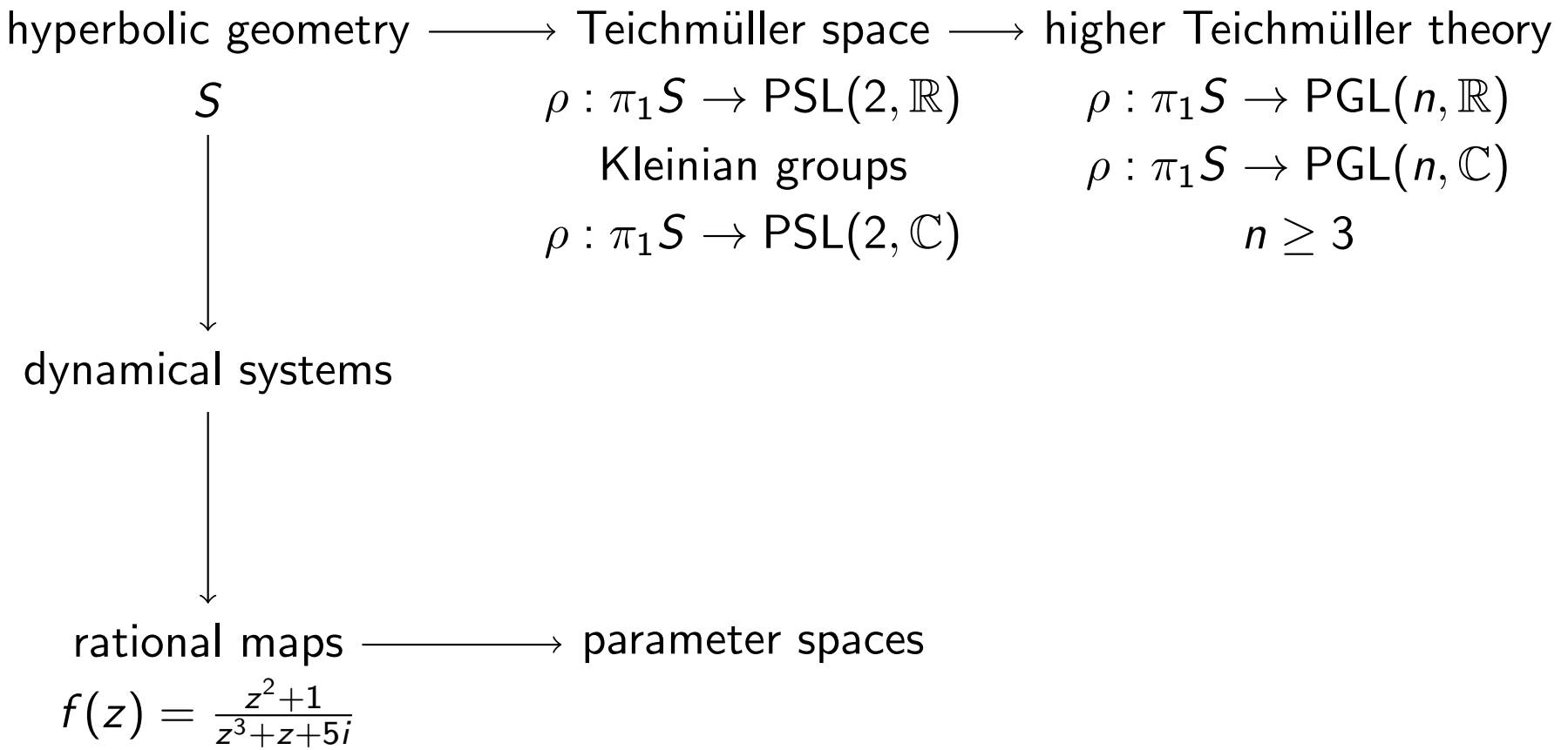
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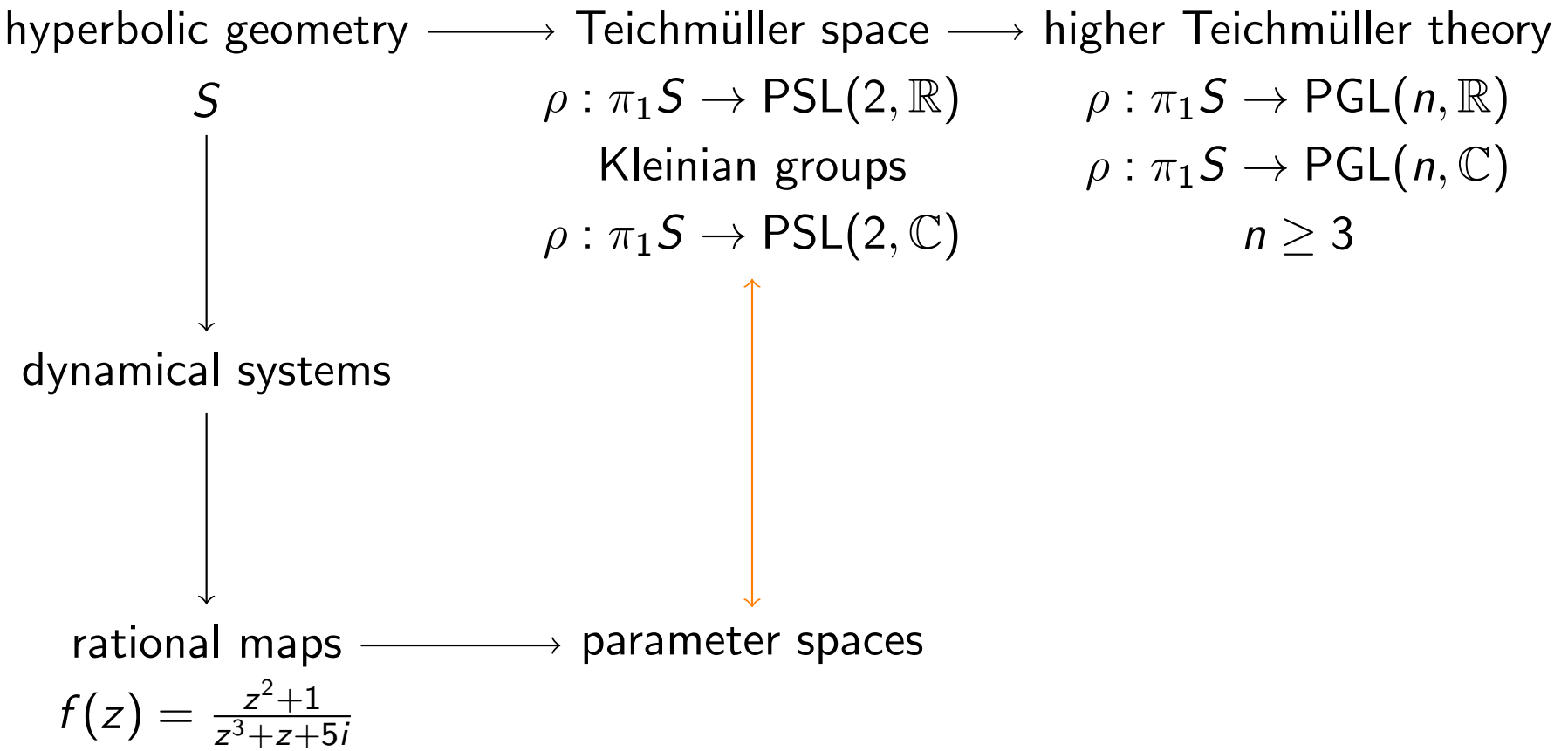
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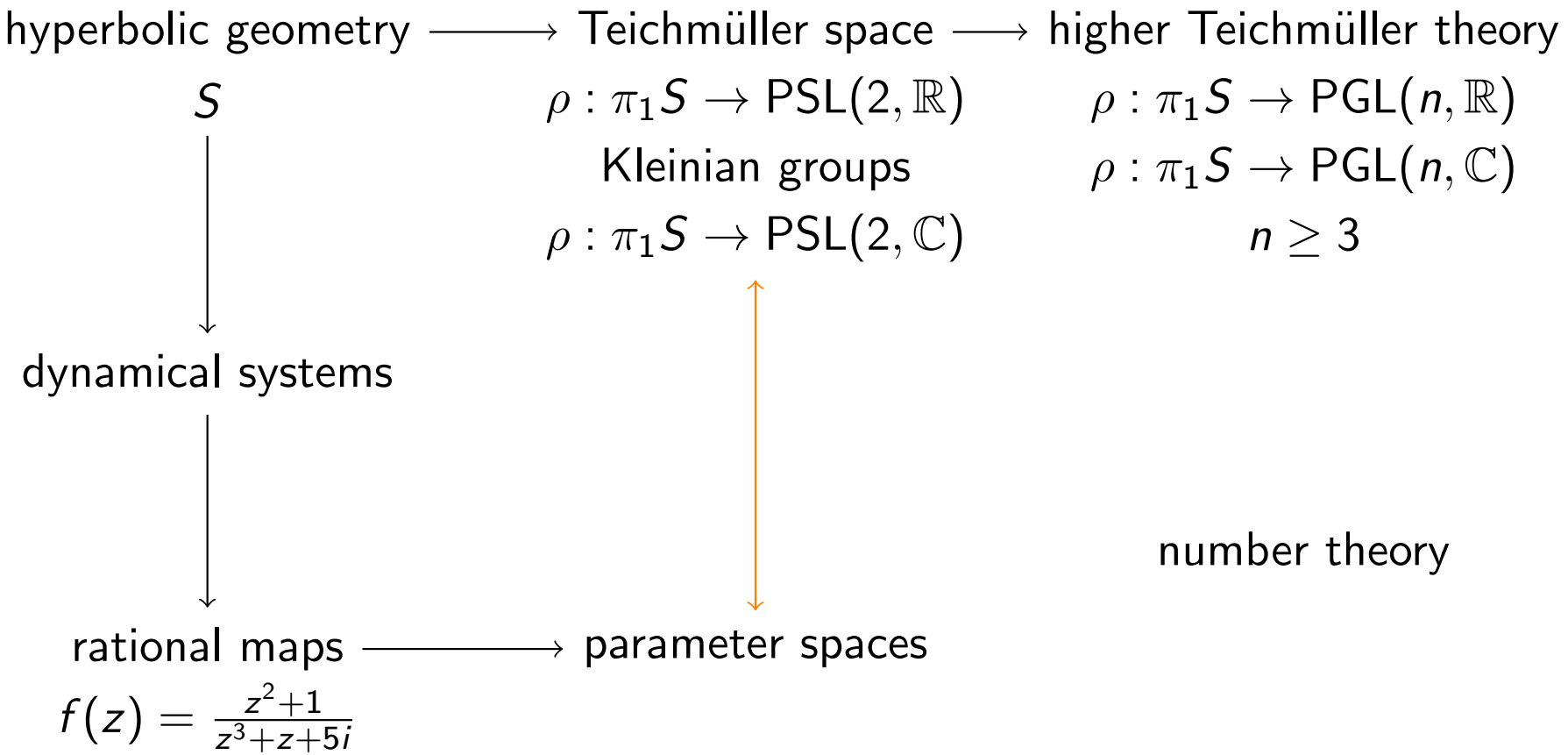
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