

Title: Roland Bittleson

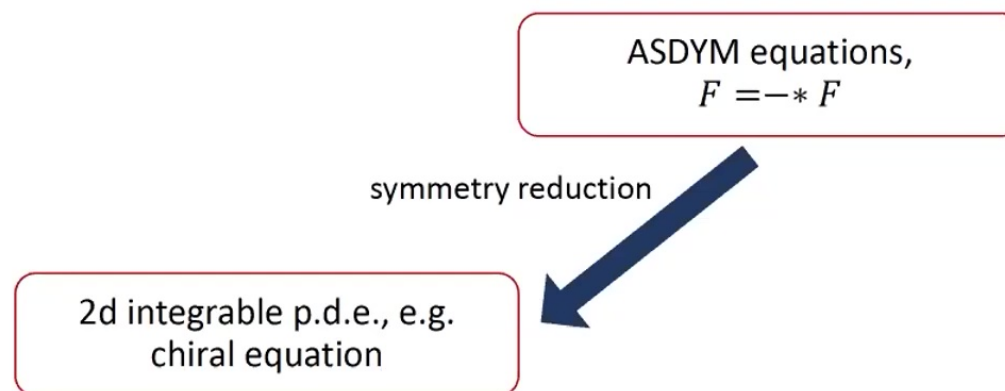
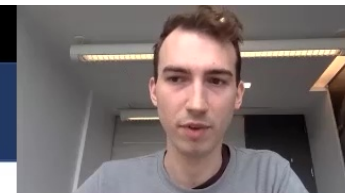
Speakers: Roland Bittleston

Collection: Postdoc Welcome 2021

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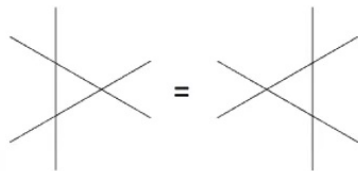
Twistors, integrability and 4d Chern-Simons theory



Twistors, integrability and 4d Chern-Simons theory



4d Chern-Simons theory

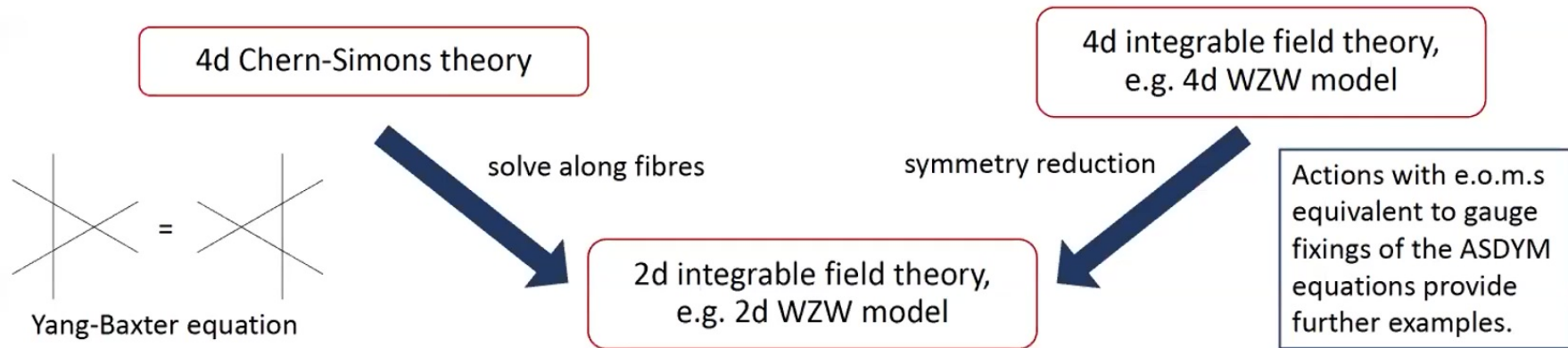


Yang-Baxter equation

solve along fibres

2d integrable field theory,
e.g. 2d WZW model

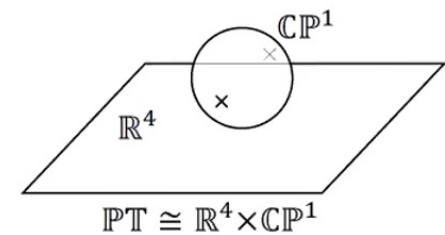
Twistors, integrability and 4d Chern-Simons theory



Twistors, integrability and 4d Chern-Simons theory

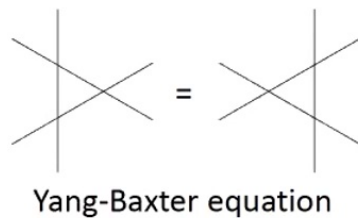


6d holomorphic theory on
twistor space, \mathbb{PT} , e.g.
holomorphic Chern-Simons



solve along fibres

4d Chern-Simons theory



solve along fibres

2d integrable field theory,
e.g. 2d WZW model

4d integrable field theory,
e.g. 4d WZW model

symmetry reduction

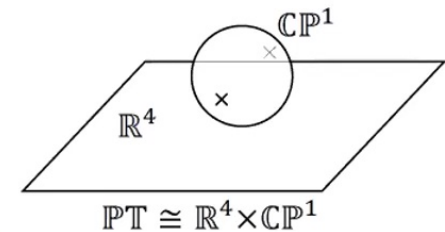
Actions with e.o.m.s
equivalent to gauge
fixings of the ASDYM
equations provide
further examples.

Twistors, integrability and 4d Chern-Simons theory



Actions for partially holomorphic CS-type theories take the form $S[A] = \frac{1}{2\pi i} \int \omega \wedge \text{CS}(A)$ for ω a $d-3$ form.

6d holomorphic theory on twistor space, \mathbb{PT} , e.g. holomorphic Chern-Simons

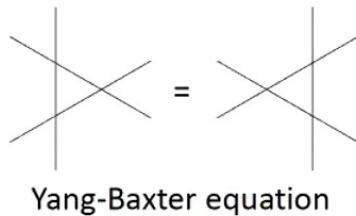


symmetry reduction

solve along fibres

4d partially holomorphic theory, e.g. 4d Chern-Simons

4d integrable field theory, e.g. 4d WZW model



solve along fibres

symmetry reduction

2d integrable field theory, e.g. 2d WZW model

Actions with e.o.m.s equivalent to gauge fixings of the ASDYM equations provide further examples.