# An Introduction to String Theory

Mate Zoltan Farkas

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#### Introduction – Notation

- Metric:
  - $\bullet$   $\eta_{\mu
    u}=\mathsf{diag}(-1,+1,\,\ldots,\,+1)$

#### The Relativistic String – The Action

Consider the action of a point particle: x

$$S = -m \int dt x \sqrt{1 - \dot{\vec{x}}\dot{\vec{x}}}$$

- ▶ first item
  - subitem
    - subsubitem
- second item
  - 1 item 1
    - 1.1 subitem 1
    - 1.2 subitem 2
  - 2. item 2
- ► third item

- ▶ first item
  - subitem
    - subsubitem
- second item
  - 1 item 1
    - 1.1 subitem 1
    - 1.2 subitem 2
  - 2. item 2
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  - 2. item 2
- third item

#### Covariant Quantization of the Solutions of the Nambu-Goto Action

$$S = \frac{1}{2\pi\alpha'} \int \sqrt{-\det g} \,\partial_{\mu} \tag{1}$$

