

力学与实践

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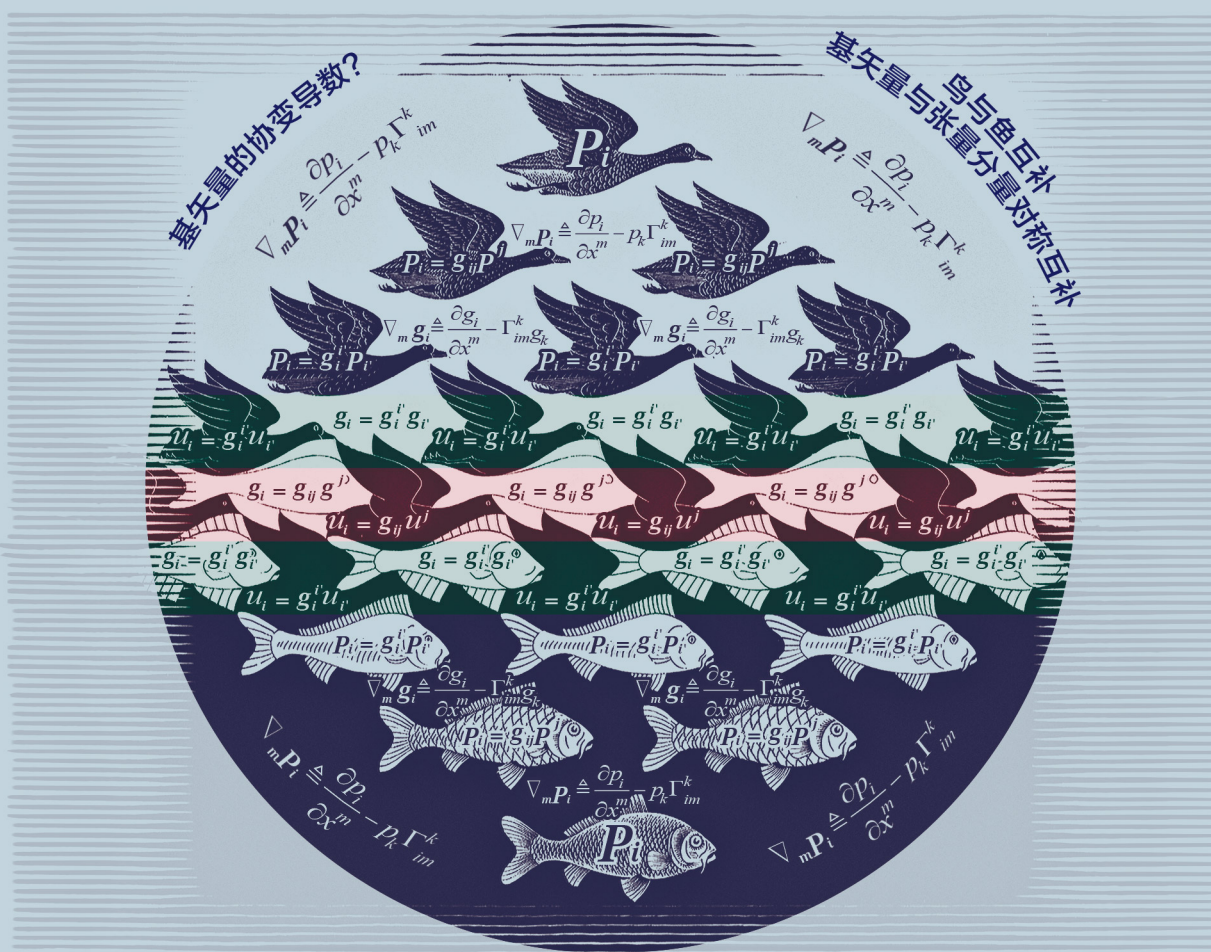
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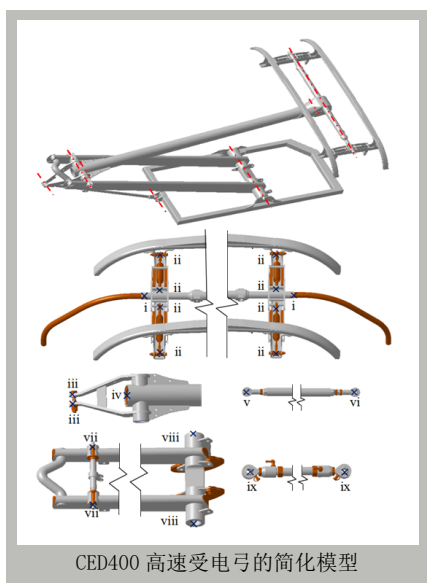
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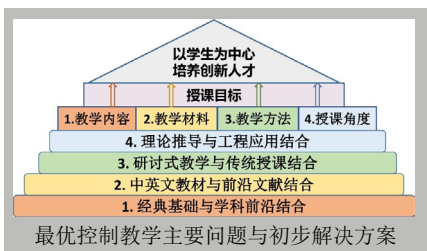
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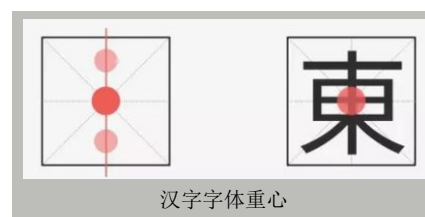
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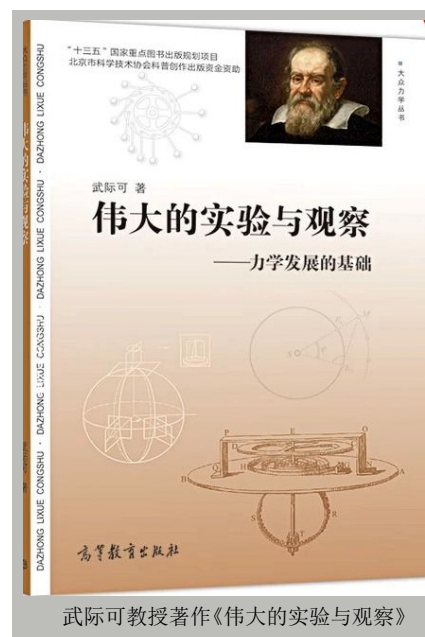
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封面故事

Escher 是荷兰画家。其画作“鱼鸟图”的主题是拓扑镶嵌中的对称性、对偶性和相似性。椭圆形画面上, 飞鸟和游鱼不断向对方拓展演进, 逐渐融为一体, 构成美轮美奂的对称互补画面。广义协变性思想是张量分析学中发展出来的新观念。基矢量与分量之间存在对称性。借助公设, 可规定基矢量的协变导数与分量的协变导数之间的对称性。进而证实: 张量分析学中存在对称的解析结构。封面图以鱼鸟图为背景, 将广义协变性思想的对称性展示得淋漓尽致。鱼和鸟看似非同类, 基矢量和分量看似非同型。然而, 在对称性思想之下, 最终都走向了和谐和统一。(图文供稿: 彭刚, 清华大学航天航空学院)

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