

The significance of foundational problems in basic sciences

School of Physics, IPM

21 Azar 1398 (12 December 2019)

آیا جهان امروز تحقیقات بنیادی می‌طلبد؟

سیاوش شهشانی

- عدم توجه به مسائل علمی بنیادی، یعنی موضوع‌های فراگیر و اساسی

- عدم توجه به علم محض در برابر مقولات کاربردی

- عدم توجه به بینش‌های فردی در مقایسه با علم بزرگ مقیاس

- عدم توجه به اصالت کار پژوهش در برابر تاکید بر ظواهر و نمود پژوهش

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Fundamental sciences encompass a variety of fields, including physics, biology, and mathematics, ***which seek to provide a coherent, deep, and universal insight into reality.*** Since these areas intertwine, researchers need to be aware of different fields to provide a unified and consistent view of nature. They are faced with many fundamental and challenging problems. Some of these issues in cognitive science and mathematics, brain and complex systems, gravity and cosmology, and quantum mechanics are dealt with in this one-day event.

DICHOTOMIES

Semantic	Syntactic
Synthetic	Analytic
Intuitive	Symbolic (Computational)
Right Brain	Left Brain
Set theory	Category Theory
Explanation	Prediction

علوم داده :
تلاشی برای فهم جهان یا تغییر آن؟! !

کسری عیشاهی

دی ۱۳۹۷

<https://www.aparat.com/v/MerIL>

“Data Science has become a fourth approach to **scientific discovery**, in addition to experimentation, modeling, and computation...”

University of Michigan 100 million dollar

Data Science Initiative (2015)