



Siri-69

The
Beauty
of
PHYSICS
and
MATHS

Beautiful MATHEMATICS

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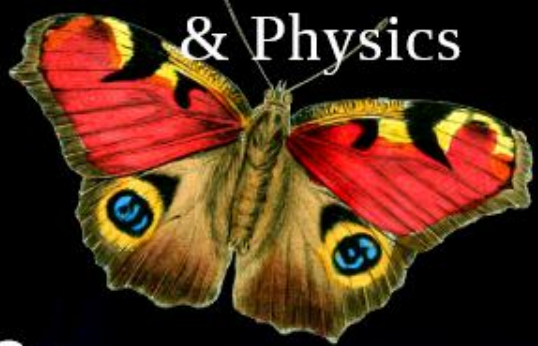
JURUSAN MATEMATIKA | FAKULTAS MIPA
UNIVERSITAS ANDALAS

SEMINAR NASIONAL
Pekan Seni Bermatematika XV

Seminar Siswa
25 FEBRUARI 2018 (Ahad)
1.30pm, Ruang Seminar Gedung 1



Natural Beauty & Physics



Physics is Life
Newton & Einstein

Physics & STEM
Challenges in Science
Education (Science & Humanity)

Physics Empire



PHYSICS TIMELINE

SPACE Science,
Engineering & Technology
from
Apollo mission
& beyond



Gravity



Atom
& Quantum Engineering

BEAUTIFUL MATHEMATICS π
Pi World Ranking List

space-time curvature
space-time engineering

Nobel Prize, Fields Medal,
Millenium Prize

KENAPA pelajar TAK MINAT



?

SAINS

& Matematik

STEM around the World & Education TRANSFORMATION



Pusat
STEM Negara





Pendidikan itu

adalah

SEBAHAGIAN

(CERMINAN)

dari

BUDAYA

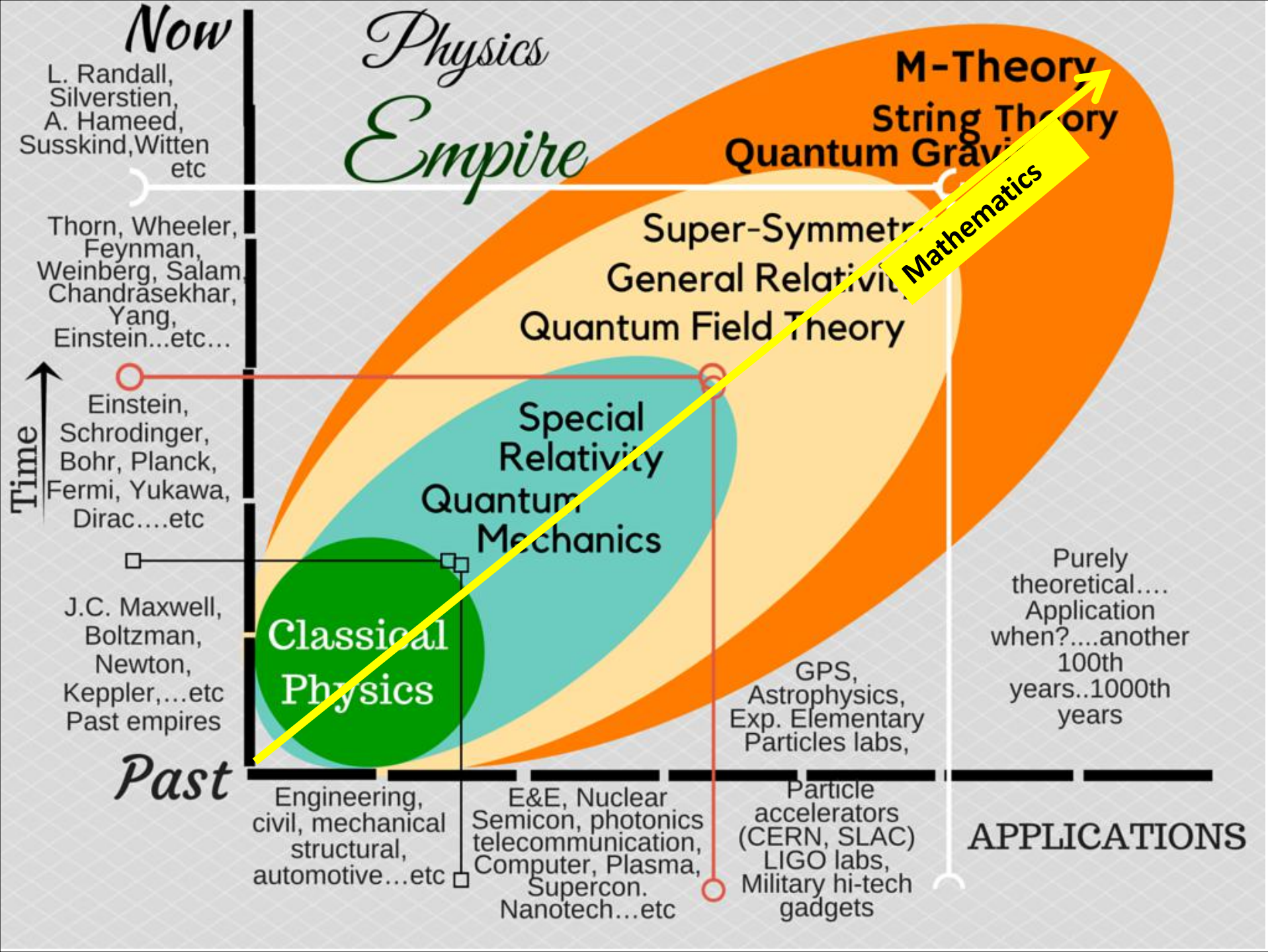
kita

A black and white portrait of Albert Einstein, showing his characteristic wild, white hair and mustache. He is looking directly at the camera with a slight smile. The background is dark and out of focus.

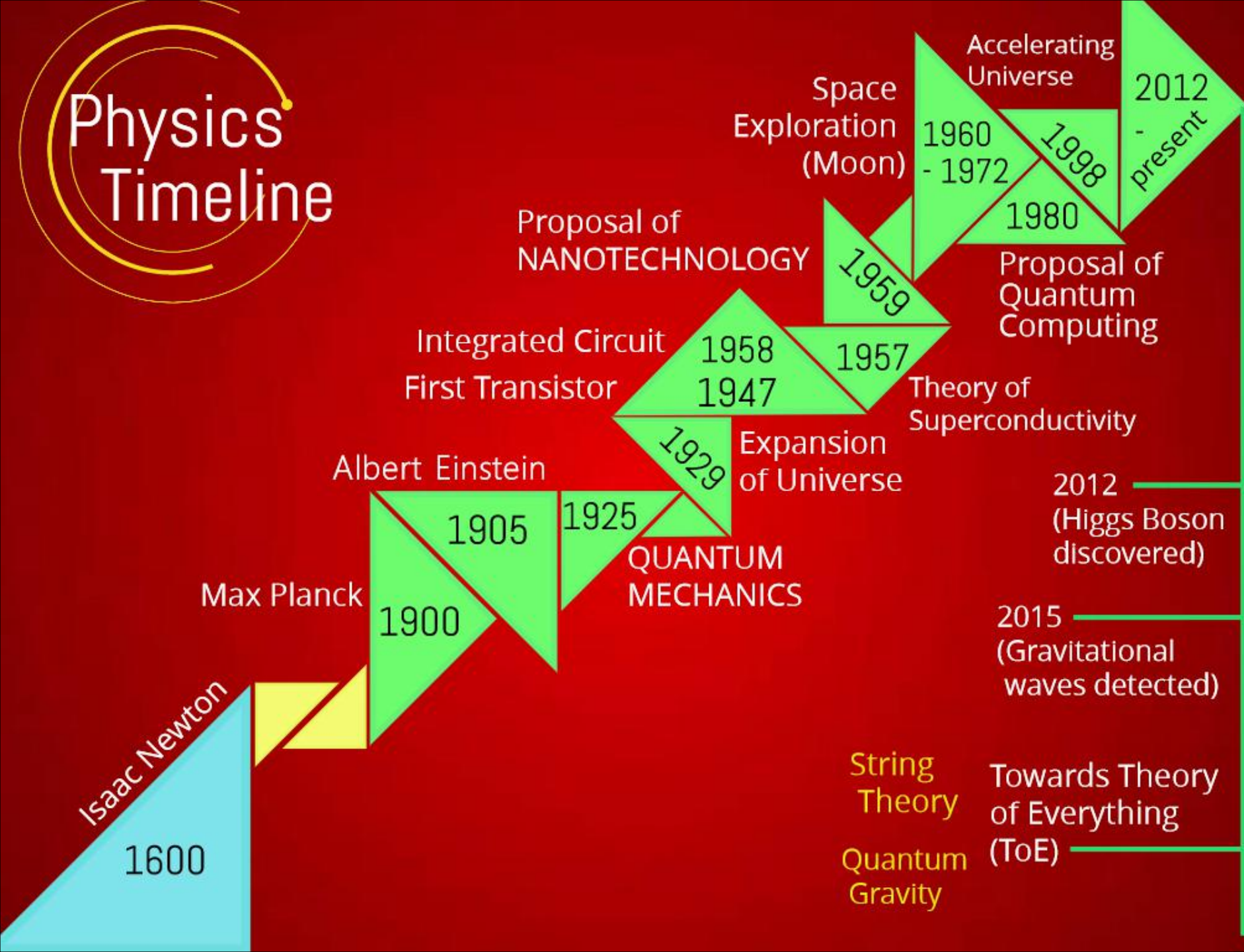
Physics...the

BEAUTY

Albert Einstein



Physics Timeline



Berapa ramai yang TIDAK PERCAYA program pendaratan manusia di Bulan melalui misi Apollo NASA?



Beauty of Mathematics

Notation for
Differentiation

$$\frac{dy}{dx} \quad \frac{d^2y}{dx^2}$$

$$f'(x) \quad f''(x)$$

$$D_x y \quad D^2 f$$

$$\dot{x} \quad \ddot{x}$$

RANKING LIST



INDONESIA: 110 digits (21/4/2015)

PHILIPPINES: 1,183 digits (02/8/2012)
241 digits (14/03/2016)

SINGAPORE: 1,380 digits (09/12/2013)
518 digits (14/9/2008)
549 digits (14/03/2016)

THAILAND: 10 persons, ranging from 52 digits to
410 digits (2007 - 2015), national record: 122 digits

VIETNAM: 133 digits (14/4/2017)

MALAYSIA: 60 digits (10/11/2017)

The SEVEN (7) Great Millennium

MATHEMATICS PROBLEMS <http://www.claymath.org/>

\$ 7,000,000

1 **Yang-Mills & Mass Gap**

Proof of existence of a 'mass-gap'.



4 **Navier-Stokes Equation**

Proof for unique solution

Clay Mathematics Institute

Dedicated to increasing and disseminating mathematical knowledge

2 **Reimann Hyphotesis**

About the prime number theorem



5 **Hodge Conjecture**

Topology of the solution set of a system of algebraic equations

3 **P vs NP Problem**


The Hamiltonian Path problem

7 **Birch & Swinnerton-Dyer Conjecture**

Relates the number of points on an elliptic curve mod p to the rank of the group of rational points.

6 **Poincare Conjecture**

3D sphere - SOLVED

A woman with dark hair, wearing a green and white striped shirt and dark pants, is kneeling on a wooden floor. She is leaning over a large sheet of white paper that is spread out on the floor. She is holding a blue pen and appears to be writing or drawing on the paper. The paper has some faint sketches and text on it. In the background, there is a brown sofa and a television.

'The more I spent
time on maths,
the more excited
I got'

Maryam Mirzakhani (1977-2017)

Professor of Mathematics at Stanford University, USA

"Wanita pertama di dunia yang dianugerahkan Fields Medal"

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