

Physics & Engineering Physics

MORGAN STATE UNIVERSITY

EASY WARM UP

IDENTIFY THESE OCCUPATIONS



IDENTIFY THESE OCCUPATIONS



Fireman



Veterinarian



Programmer



Surgeon



Police Officer

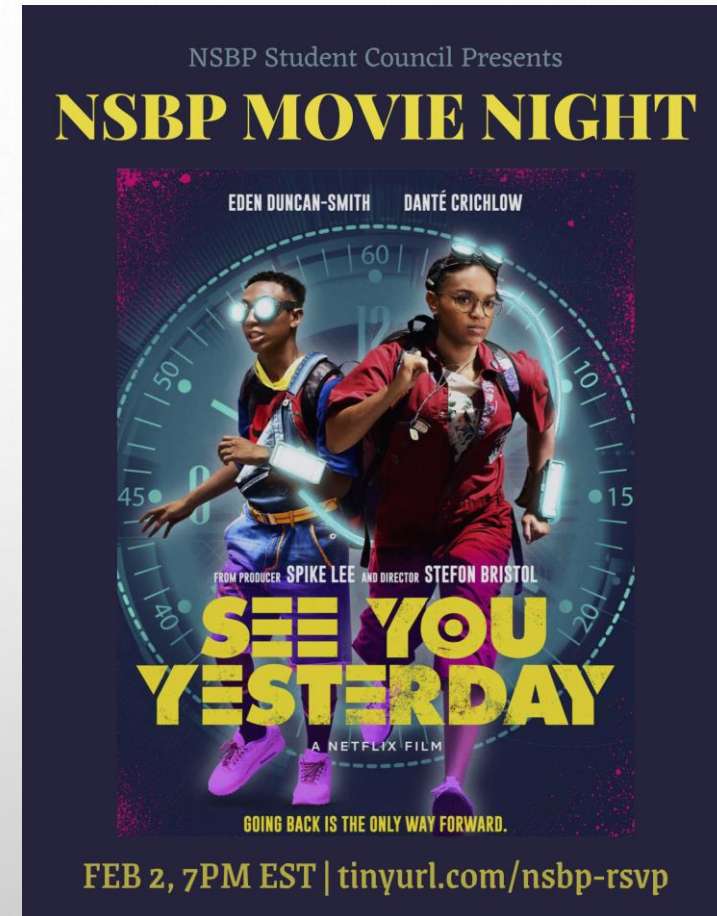


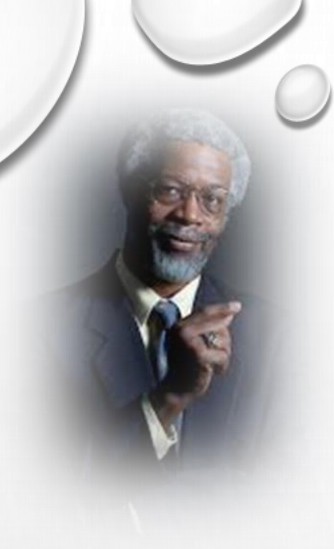
Judges (Baltimore City Circuit Court)

EASY WARM UP

CAN YOU SPOT THE PHYSICIST?

(THIS IS A LITTLE HARDER)





Sylvester
James Gates
(Physicist) –
Theoretical
Physicist



Valerie Thomas
(Physicist) – Scientist,
Inventor, and Morgan
State Alumna



Eden Duncan-Smith –
Actress, Physicist, and
current Morgan State
Student

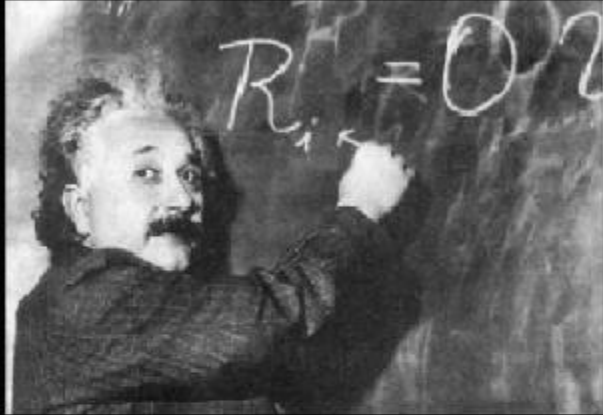


Shirley Jackson (Physicist)- *President of RPI and
1st woman awarded a Ph.D. from MIT. Her many
awards include the National Medal of Science.*



Edward Bouchet (Physicist) 1852-1918
Yale graduate and 1st African-American in
history awarded Ph.D.

PHYSICIST



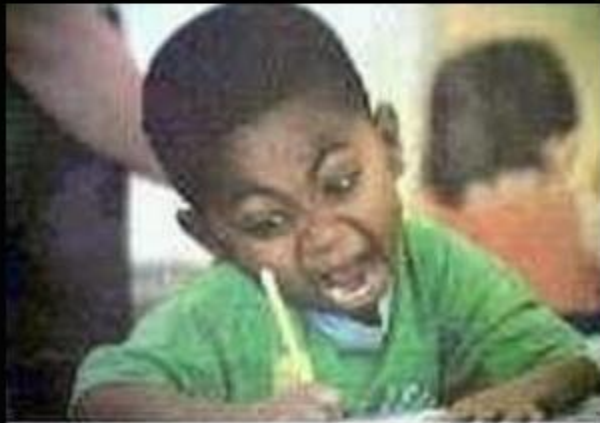
What my friends think I do



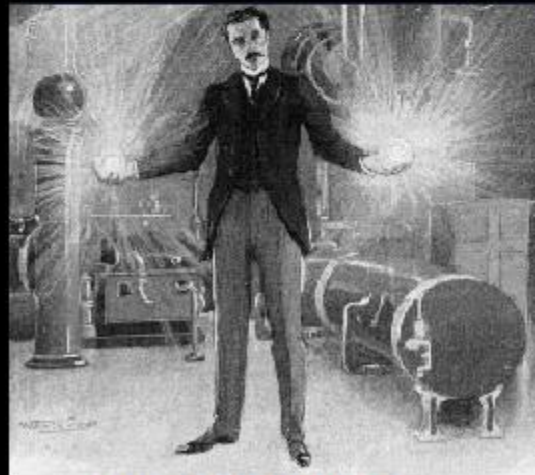
What my mother thinks I do



What society thinks I do



What mathematicians think I do



What I think I do

$$\begin{aligned}\hat{H}|P, Q\rangle &= \epsilon|P, Q\rangle \\ \mathbf{1} &= \int d\rho |\rho\rangle \langle \rho| \\ \langle \rho|\rho'\rangle &= \delta(\rho - \rho') \\ \int \langle \rho|\hat{H}|\rho'\rangle \langle \rho'|P, Q\rangle d\rho' &= \epsilon \langle \rho|P, Q\rangle \\ \langle \rho|P, Q\rangle &= \begin{pmatrix} P(\rho) \\ Q(\rho) \end{pmatrix}\end{aligned}$$

What I really do

What is Physics?

Physics underlies all basic science and engineering – biology, chemistry, and astronomy.

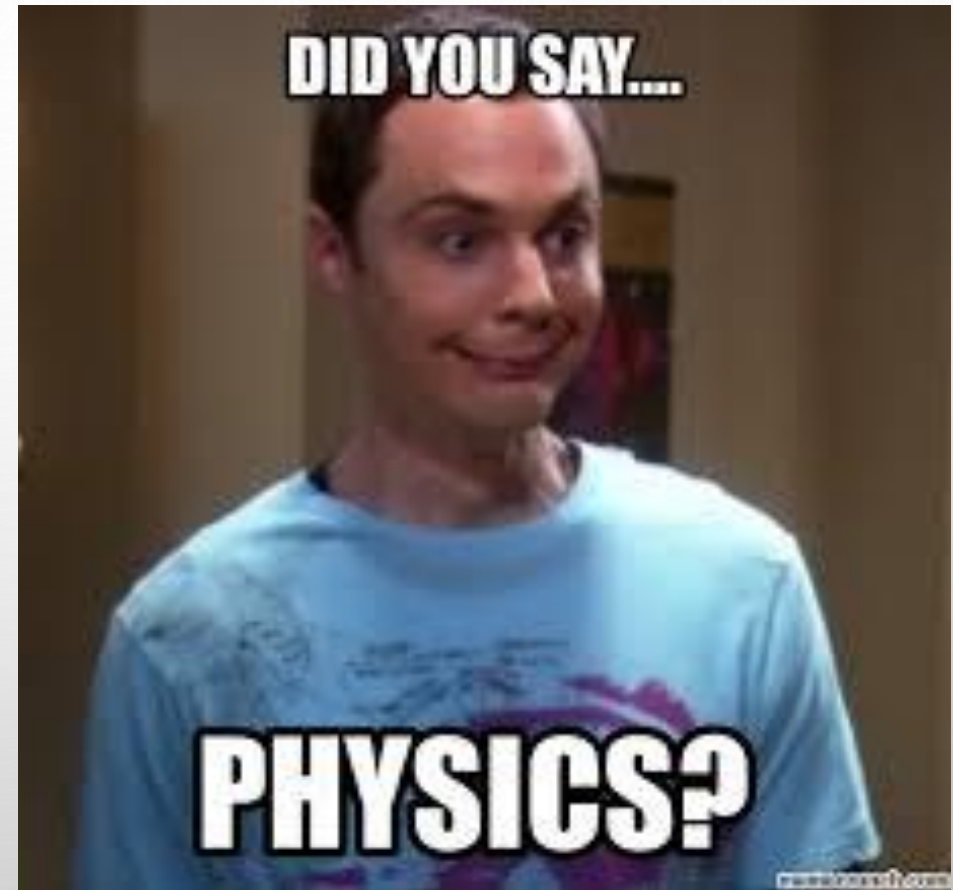
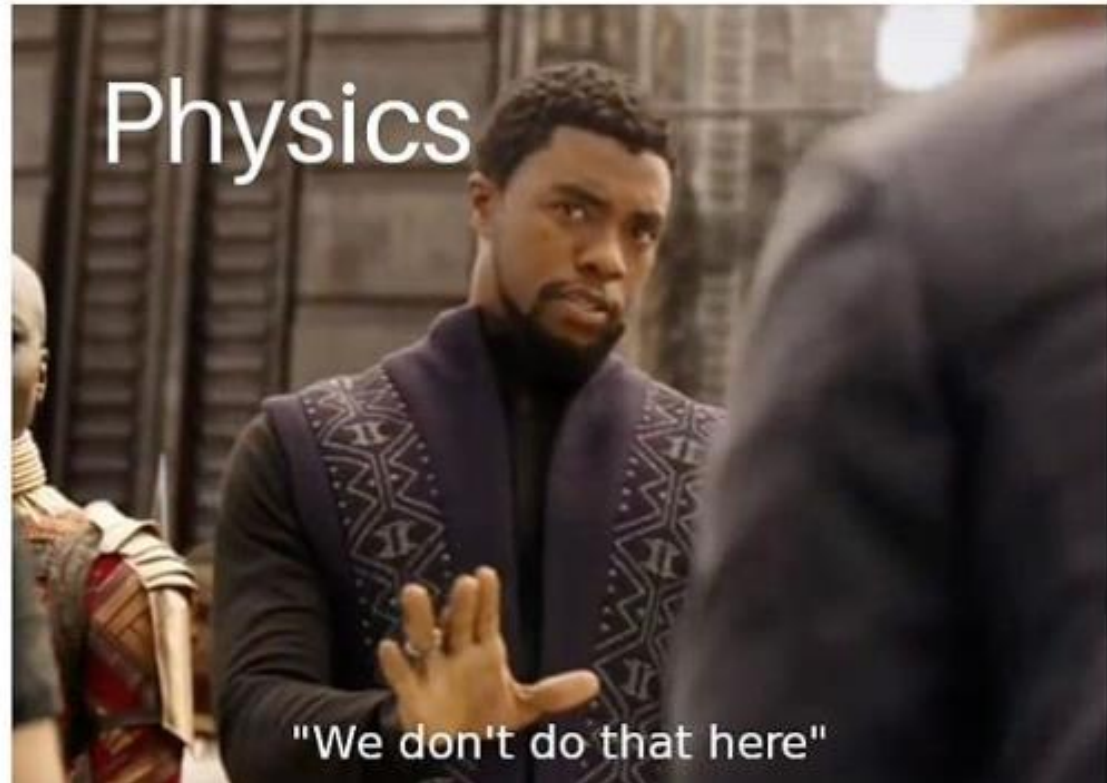
- Engineering
- Mechanics
- Optics
- Electronics
- Magnetics
- Semiconductors
- Mechanics
- Data Processing
- Medical Technology
- Fluids
- Acoustics
- Teaching
- Space Exploration
- Astronomy
- Materials and Construction

Physics in Everyday Life

If you've ever wondered what makes lightning, how planes fly, how to make better cell phones, or how long it takes light from a star to reach us – you have been thinking about some of the same things physicists study every day!

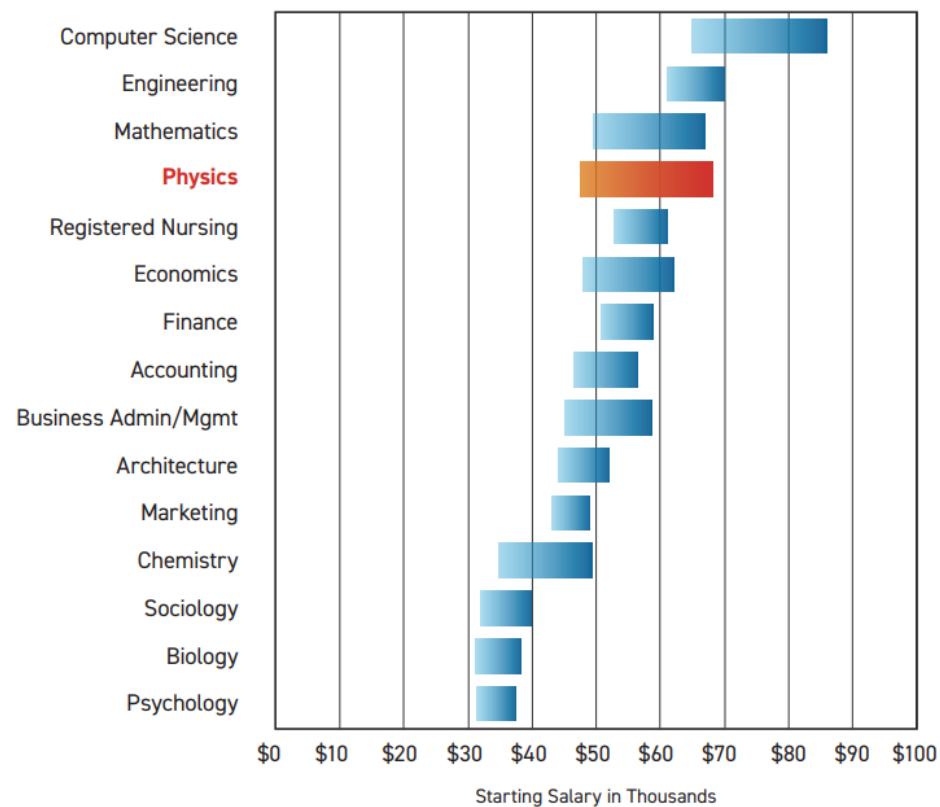
LET'S EXPLORE WHY PHYSICS?

"Friction is an important part of every physical process."



What Do New Bachelors Earn?

Starting Salaries for the Class of 2018



Bars represent the middle 50% of salaries, i.e. between the 25th and the 75th percentiles.

Reprinted from the Summer 2019 Salary Survey, with permission of the National Association of Colleges and Employers, copyright holder.

MOST COMMON BACHELOR PHYSICIST JOB TITLES

ENGINEERING

- SYSTEMS ENGINEERS
- ELECTRICAL ENGINEERS
- DESIGN ENGINEERS
- MECHANICAL ENGINEERS

Computer Hardware & Software

- Software Engineers
- Programmers
- Web Developers
- IT Consultants

And the list goes
on...

Research & Technical

- Research Assistant
- Research Associate
- Research Technician
- Lab Technician

Education

- High School Physics Teacher
- High School Science Teacher
- Middle School Science Teacher

TOP EMPLOYERS NEED PHYSICISTS

AREA EMPLOYERS ACTIVELY SEEK OUR GRADUATES
WHO GO ON TO DO BIG THINGS!!

TOP RECRUITERS INCLUDE:

- ***JOHN HOPKINS' APPLIED PHYSICS LABORATORY***
- ***THE NAVAL SURFACE WARFARE CENTER***
- ***NASA'S GODDARD SPACE CENTER AND***
- ***THE UNITED STATES PATENT AND TRADEMARK OFFICE.***

THESE ARE JUST TO NAME A FEW!



WHY CHOOSE MORGAN STATE PHYSICS & ENGINEERING PHYSICS?

Relevant Research

- AS A PHYSICS MAJOR AT MORGAN, YOU'LL PARTICIPATE IN RELEVANT RESEARCH USING THE SAME STATE-OF-THE-ART ELECTRONIC INSTRUMENTS FOUND IN LABORATORIES AROUND THE WORLD.



Valuable Life Skills



Fun

ARROW Rocket launch demo – 10/2020

COME JOIN US!



www.Morgan.edu/Physics

Physics_Department@morgan.edu

Questions?