

#### NagBody lectures: Pointers

Mario Alberto Rodríguez-Meza

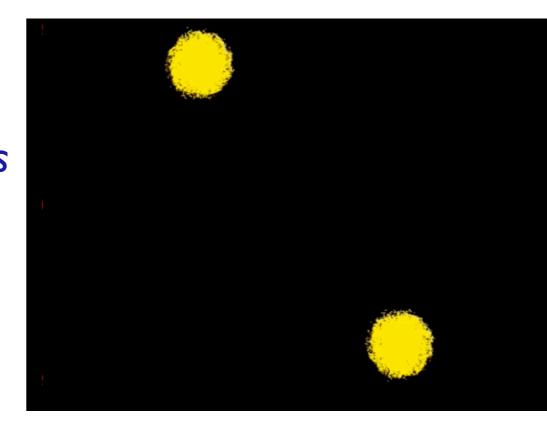
Instituto Nacional de Investigaciones Nucleares
Correo Electrónico: marioalberto.rodriguez@inin.gob.mx

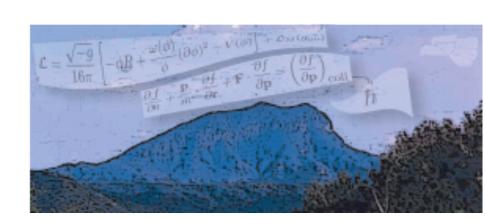
<a href="http://bitbucket.org/rodriguezmeza">http://bitbucket.org/rodriguezmeza</a>

Seminario de investigación,
Departamento de Física,
Universidad de Guanajuato
3 de febrero al XX de junio de 2022
Sesiones virtuales (Zoom, Meet, etcétera)



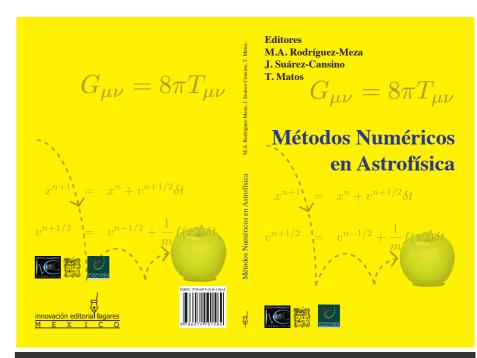






#### References and material

- Métodos numéricos en astrofísica, capítulo I, Método de N-cuerpos en astrofísica. (<a href="https://www.researchgate.net/publication/316582859\_Metodo\_de\_N-Cuerpos\_en\_Astrofisica">https://www.researchgate.net/publication/316582859\_Metodo\_de\_N-Cuerpos\_en\_Astrofisica</a>)
- La estructura a gran escala del universo. Capítulo 22 en
  Travesuras cosmológicas de Einstein et al. <a href="https://www.researchgate.net/publication/">https://www.researchgate.net/publication/</a>
   316582400 La estructura a gran escala del universo simulaciones numericas
- <a href="https://www.researchgate.net/profile/Mario\_Rodriguez-Meza">https://www.researchgate.net/profile/Mario\_Rodriguez-Meza</a>
- https://www.researchgate.net/publication/
   314281416\_Los\_agujeros\_negros\_y\_las\_ondas\_del\_Dr\_Einstein
- M.A. Rodriguez-Meza, Adv. Astron. 2012, 509682 (2012). arXiv: I112.5201. (https://www.researchgate.net/publication/
   51967093 A Scalar Field Dark Matter Model and Its Role in the Large-Scale Structure Formation in the Universe)





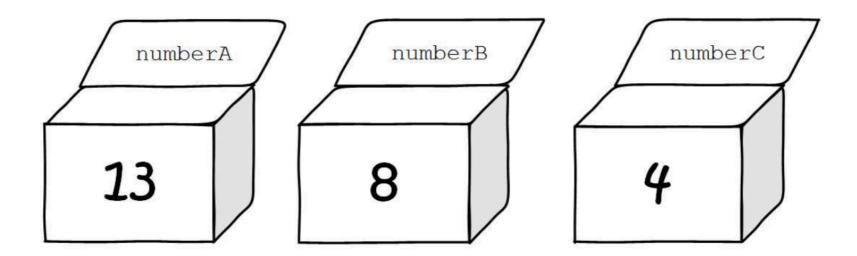


# Content: Pointers

• Variable and constant concepts

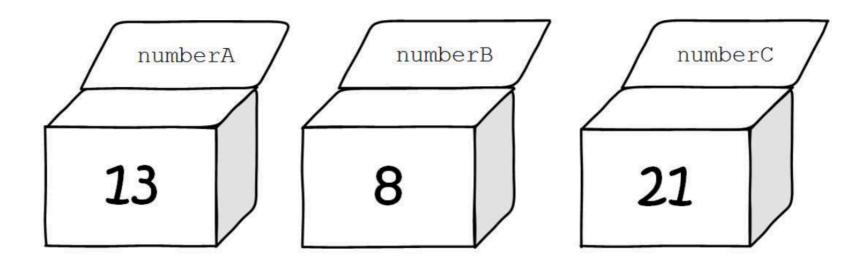


• A variable is a location in computer's main memory where a program can store its value and change it as program executes.



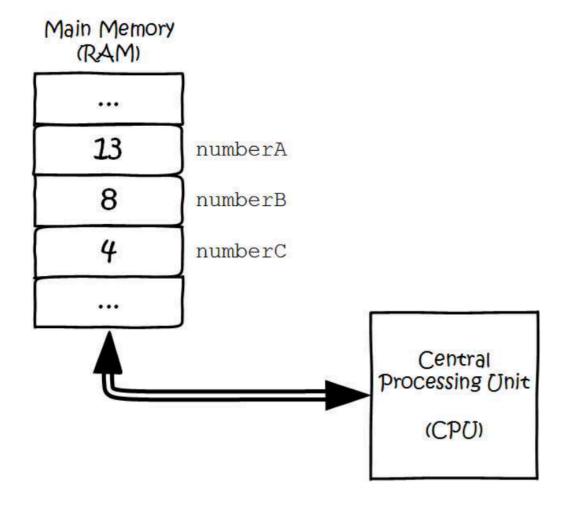


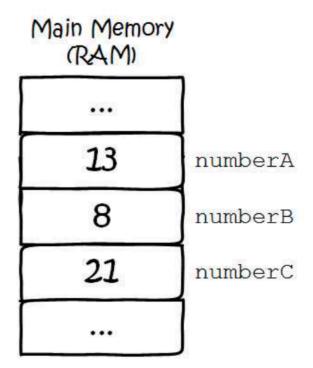
• A variable is a location in computer's main memory where a program can store its value and change it as program executes.





• A variable is a location in computer's main memory where a program can store its value and change it as program executes.







- A variable is one of the most important concept in programming.
- It helps to interact with the data stored in the main computer's memory.
- How many types there are:
  - a. Integer.
  - b. reals.
  - c. Booleans.
  - d. Characters

• What does it mean to declare a variable?



#### Conclusions: Pointers

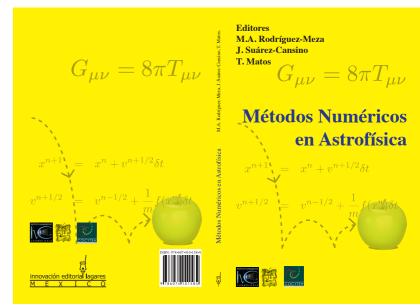
#### We have seen:

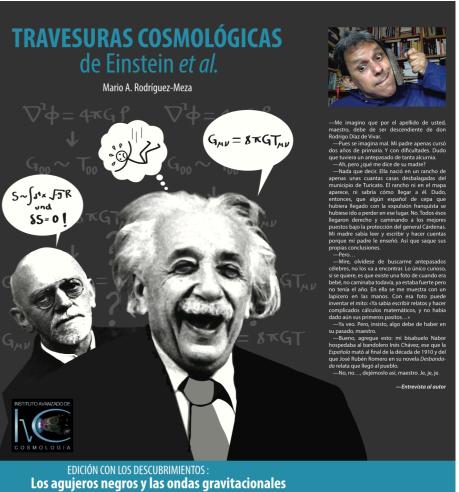
- What is a variable.
- What is a constant.
- Types of variables.
- Declaring variables.



#### References and material

- Métodos numéricos en astrofísica, capítulo I, Método de N-cuerpos en astrofísica. (<a href="https://www.researchgate.net/publication/316582859\_Metodo\_de\_N-Cuerpos\_en\_Astrofisica">https://www.researchgate.net/publication/316582859\_Metodo\_de\_N-Cuerpos\_en\_Astrofisica</a>)
- La estructura a gran escala del universo. Capítulo 22 en
  Travesuras cosmológicas de Einstein et al. <a href="https://www.researchgate.net/publication/">https://www.researchgate.net/publication/</a>
   316582400 La estructura a gran escala del universo simulaciones numericas
- <a href="https://www.researchgate.net/profile/Mario\_Rodriguez-Meza">https://www.researchgate.net/profile/Mario\_Rodriguez-Meza</a>
- https://www.researchgate.net/publication/
   314281416 Los agujeros negros y las ondas del Dr Einstein
- M.A. Rodriguez-Meza, Adv. Astron. 2012, 509682 (2012). arXiv: I112.5201. (https://www.researchgate.net/publication/ 51967093\_A\_Scalar\_Field\_Dark\_Matter\_Model\_and\_Its\_Role\_in\_the\_Large-Scale\_Structure\_Formation\_in\_the\_Universe)







#### See you!

