

# THE SOLITUDE OF PRIME NUMBERS

STEFANO FORTE  
UNIVERSITÀ DI MILANO & INFN



UNIVERSITÀ DEGLI STUDI DI MILANO  
DIPARTIMENTO DI FISICA

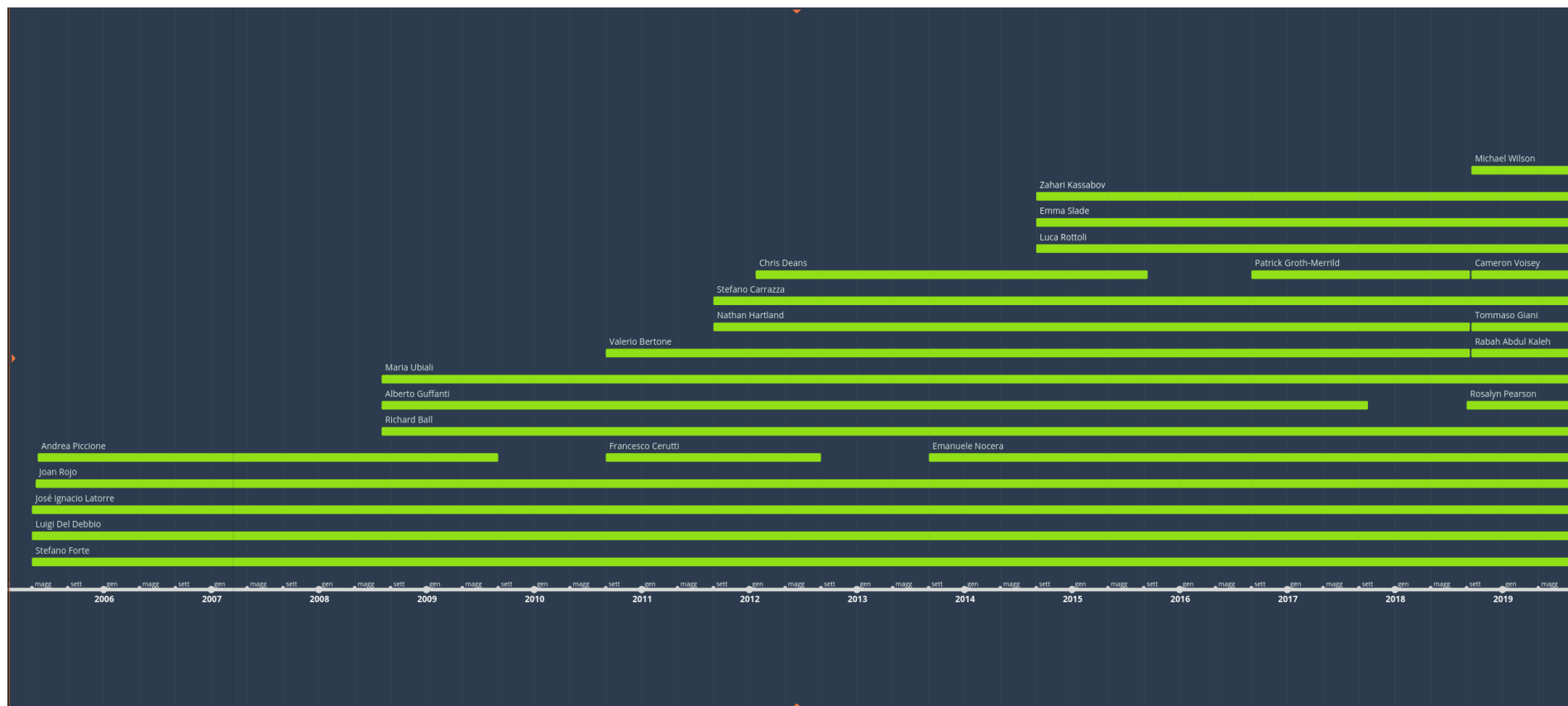


NNPDF+N<sup>3</sup>PDF MEETING

VARENNA, AUGUST 28, 2019

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# NNPDF PEOPLE

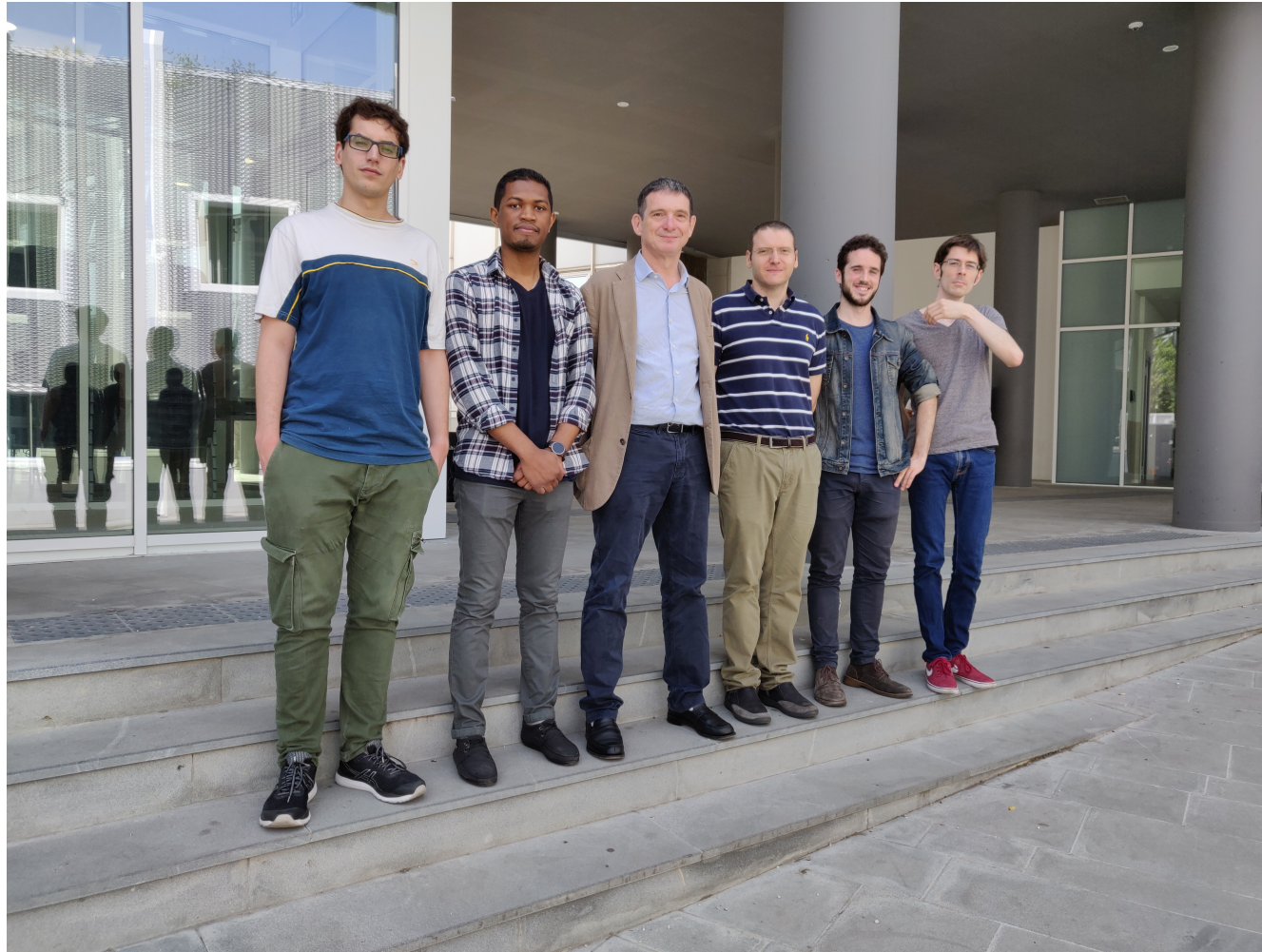


& WELCOME TO Shayan Iranipour

# NNPDF PEOPLE



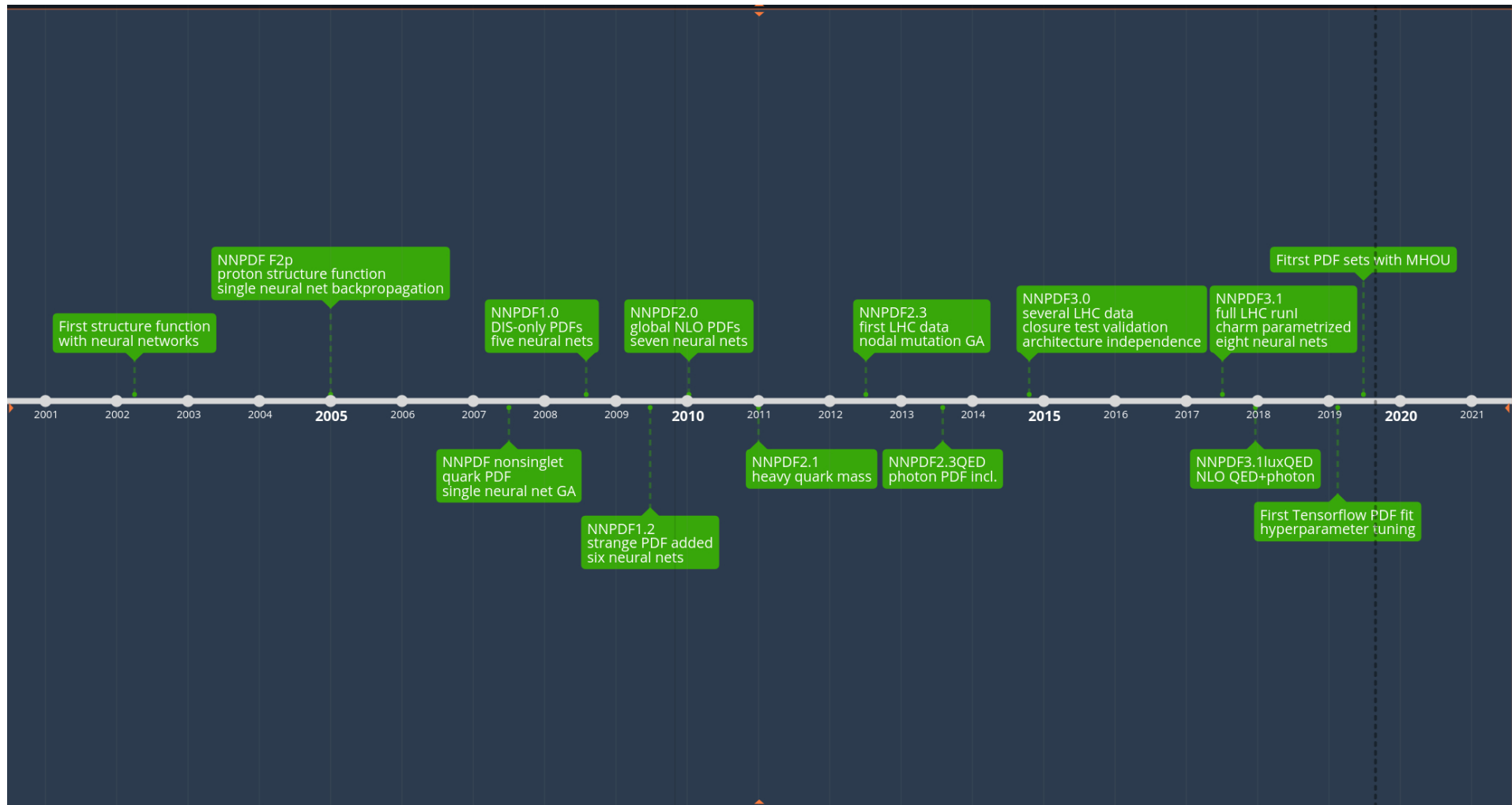
# N<sup>3</sup>PDF PEOPLE



**OCT 1, 2018:** Stefano Carrazza, Juan Cruz Martinez, Christopher Schwan,  
Tanjona Rabemananjara, Jesús Urtasún Elizari

**WELCOME TO** Felix Hekhorn, Kirill Kudashkin, Alessandro Candido

# NNPDF+ N<sup>3</sup>PDF RESULTS



# NNPDF+ N<sup>3</sup>PDF PROGRESS

N<sup>3</sup>PDF

NNPDF

Stefano Carrazza and Juan Cruz Martinez,

“Towards a new generation of parton densities with deep learning models”,

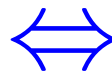
Eur. Phys.J. C79 (2019) 676

Stefano Carrazza and Frdric A. Dreyer,

“Jet grooming through reinforcement learning”,

Phys.Rev. D100 (2019) no.1, 014014

- N<sup>3</sup>FIT
- TOWARDS HYPEROPT



The NNPDF Collaboration,

“A First Determination of Parton Distributions with Theoretical Uncertainties”, arXiv:1905.04311

The NNPDF Collaboration,

“Parton Distributions with Theory Uncertainties: General Formalism and First Phenomenological Studies”, arXiv:1906.10698

- PDFs WITH THEORY UNCERTAINTIES
- TOWARDS NNPDF4.0

- S
  - LARGE GROUP, DIVERSE COMPETENCES
  - R&D & PRODUCTION SEPARATE AND EQUAL
- W
  - LACK OF COORDINATION ⇒ BUGS
  - LACK OF COMMUNICATION ⇒ FRUSTRATION
- O
  - NEW DISCOVERIES
- T
  - SOLITUDE