**HORIZON 2020**

**MARIE SKLODOWSKA-CURIE ACTIONS**

**INDIVIDUAL FELLOWSHIP**

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| **Organization Name/ Department/ Website** |  |
|  | Institute of Space Sciences & Astronomy - [www.um.edu.mt/issa](http://www.um.edu.mt/issa) |
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| **Organization Short Name** | ISSA |
| **Organization Type** | ⌧Academic |
|  | ☐Non-academic |
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| **Research Fields** | ☐ Chemistry (CHE) |
|  | ☐ Social Sciences and Humanities (SOC) |
|  | ☐ Economic Sciences (ECO) |
|  | ☐ Information Science and Engineering (ENG) |
|  | ☐ Environment and Geosciences (ENV) |
|  | ☐ Life Sciences (LIF) |
|  | ⌧ Mathematics (MAT) |
|  | ⌧ Physics (PHY) |
| **Sub-Fields/ Keywords** | Cosmology, Astrophysics, Gravity, Dark Energy, Gravitational Waves |
| **Short Description of the Organization/ Department** | ISSA is a multidisciplinary institute with links to several international groups and collaborations. Our research spans a large breath of space science and astronomy. This involves work on the design and implementation of the Square Kilometer Array project (and other astronomy systems) to fundamental developments in new and emerging theories of gravity which resolve some of the mysteries related to dark matter and dark energy. |
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| **Short Description of the Project idea** **(if foreseeable)** | The recent observation of gravitational waves has opened a new window on the Universe. Despite being short period observations, there are a host of new systems being proposed that will probe deeper and longer into this new kind of astronomy. This will put further constraints on the nature of modified and alternative theories of gravity. To achieve this goal, more work needs to be done in both theoretical and numerical aspects of gravitational wave simulations. Our group has been heavily involved in the development of the so-called teleparallel theories of gravity. The project would involve further developments to the broader class of teleparallel and symmetric theories of gravity. This would then be amenable to simulations using the Einstein Toolkit. We invite any interested individuals to work with us on this proposal. |
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| **Related Call** | MSCA-IF-2018 |
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