

Question about General Relativity

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Assume there are only two objects in the entire universe.

Let the first object have mass m_1 and have motion described by the equations $x=f_1(t)$, $y=f_2(t)$ and $z=f_3(t)$. Let their rotational motion be described by $f_4(t)$, $f_5(t)$, and $f_6(t)$.

Similarly, let the second object have mass m_2 and have motion described by the equations $x=g_1(t)$, $y=g_2(t)$ and $z=g_3(t)$. Let their rotational motion be described by $f_4(t)$, $f_5(t)$, and $f_6(t)$.

According to general relativity, what is the force between these two objects?

I am aware of the fact that problems like this often become quite complicated in GR, but I am fine with an answer that contains such elements as differential geometry and tensor analysis.

Thank you in advance.

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