high energy particles. As a result this string-like structure will be invisible to the present day experimentalist, and so to them these vibrating strings will appear point-like.

In string theory, when one calculates the force between these vibrating strings, one finds that they have gravitational interaction. Thus string theory automatically contains gravity – a fact that has been the main cause of so much excitement among theoretical physicists about string theory. However, if we want to show that string theory is the final theory of nature, then we must also show that at low energy, when gravitational interactions are small, string theory could be approximated by standard model. So far nobody has been able to show this, although there has been a lot of progress in this direction.

This is where we stand today. Let me end by summarising the main points. According to our present world-view, all matter is made of a set of elementary particles. We have an extremely successful theory known as the standard model for describing the interactions among these elementary particles. However, this theory does not include gravity, and hence cannot be the final theory of nature. Finding a theory that explains all phenomena involving elementary particles, including their gravitational interaction remains an open and challenging problem. Progress in this direction based on string theory has been encouraging.

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Addendum: Article by R Bhatia, Vol.4, No.12, p.105.

Please read **Suggested Reading [3]** as:

A Knutson and T Tao, The honeycomb model of the Bernstein–Zelevinsky cone I: Proof of the saturation conjecture, *Journal of the American Mathematical Society*, Vol.12, 1055–1090, Oct.1999.