Future Challenges: S. Brown ISAP – ICAP Keynote Address

1. Capitalise on the opportunities for theoretical modelling made possible by innovative ideas and computers.
2. Replace old ideas such as the CBR concept and the subgrade strain criterion for rutting.
3. Improve fundamental understanding of asphalt mixtures including durability.
4. Develop the concept of effective stiffness deterioration to deal with fatigue cracking in pavement design.
5. Provide theoretical understanding and practical solutions to reflection cracking.
6. Implement simple test methods to measure mechanical properties of asphalt mixtures.
7. Upgrade the design and construction significance of granular layers.
8. Improve non-linear resilient modelling for subgrades.
9. Incorporate the principles of soil mechanics more effectively into pavement engineering including new thinking on partially saturated soils.
10. Make good use of the data from accelerated testing facilities and field observations.
11. Measure key parameters routinely.
12. Recognise the different characteristics of heavy duty and low volume pavements.
13. Present the results of research in a manner which can be readily used in practice.