

Introduction to sports engineering

- Relationship between friction and sports -

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In Olympic Winter Games, such as bobsleigh, skelton, etc., controlling friction, i.e. reduced friction, between a runner and icy surfaces is one of the important keys to win the game. On the other hand, high friction design (anti-skid design) is required for the shoe outer-sole used in athletic sports. As mentioned above, friction has close relation to sports, and it might be an important factor to determine the game.

In this course you may investigate sports, sporting gears such as running shoes, skating runner, etc. in which friction holds the key to determine the result. Then you may investigate their frictional properties. Final goal of this course is to clarify the importance of friction in sporting gears and to suggest the method of controlling friction.



"Bobsled" called
"Formula1 on the ice"



Low friction bobsled runner
"**NAGANO SPECIAL**" which was
used in Nagano Olympic
Winter Game in 1998.