LEE RONDGANGER

Maths fundis will calculate rhino solution

SOME of the world's leading mathematicians will travel to South Africa next week to try and come up with a mathematical equation to help authorities fight the scourge of rhino poaching.

Mathematicians from the UK, Russia, India and Australia, with their South African counterparts, will converge on Wits University on Monday for a five-day Mathematics in Industry Study Group workshop.

The study groups, which have been held in various countries for more than 40 years, meet annually to solve social problems using maths.

This year, they will work with rhino role-players to come up with mathematical solutions to the increasing threat to South Africa's rhino population, focusing on white rhinos.

At previous workshops in South Africa, the study group investigated rock bursts, optimisation in mining, traffic flow, HIV in the workplace, optimal distribution of goods, renewable energy, robot motion and image processing.

The workshop will take place against a backdrop of relentless rhino carnage, with SA National Parks reporting that three rhinos have already been killed in Kruger National Park this year.

Professor Montaz Ali of the applied mathematics department at Wits University and one of the organisers of the workshop, said this year's task of solving the rhino problem would be no easy feat.

"There would be various scenarios that we will have to look at when trying to come to a mathematical solution, such as what is the job of the rangers, what is the responsibility of the government, rhino breeding and loss of rhino and what scientific method can be used efficiently.

"We will put all these scenarios in a model with the hope of solving a mathematical problem," said Ali.

He said that the mathematicians would take into account the population of South Africa's white rhinos, the supply and demand for rhino horn and the steps being taken to prevent poaching.

Other factors to be considered will be the costs of managing wild rhino populations and the argument for re-establishing a legal trade.

Ali said each scenario would be given a mathematical equation from which mathematicians could begin working out a possible solution.

"Once we have a solution we will can say you need to put so much money in to fund preservation, security and breeding," he said.

The ultimate goal would be to provide a model to wildlife authorities for a possible blueprint to fight rhino poachers. Ali said that it was unlikely that mathematicians would come up with a solution in five days.

"Next week is only the start of a year-long project. We are excited about it," he said.

Last year, 651 rhinos were killed in South Africa, which has an estimated population of 20 000 white rhinos.

Wildlife authorities have come up with various initiatives to end the slaughter, including increasing the number of armed rangers at national parks, using soldiers on the park borders, specialised police teams in the parks and the use of drone aircraft.