Cave Exploration is main task for most speleologist. There are cave humans can’t enter or even survive. Technology can help them to explore cave with modern tiny robots. Mobile robot starts its job in an unknown cave environment and faces lot of obstacles and avoids it using fuzzy logic. A mobile robot records each and every position of traveling environment using Monte Carlo localization. Mobile robots also using camera’s to capture each and every grid location and store it in a robot’s internal memory. For robot’s path planning we introduced a new methodology so that robot can map the whole cave environment in an efficient manner. This type of mobile robots will useful in an environment where people not able to travel and also this mobile robot will helpful for those who are doing researchers about cave.

References

- Zhiwei Liang, Xudong Ma and Xianzhong Dai, "Monte Carlo Localization: Extended


- Anytime Dynamic A*: An Anytime, Re planning Algorithm Maxim Likhachev, Dave Ferguson, Geoff Gordon, Anthony Stentz, and Sebastian Thrun School of Computer Science Computer Science Department Carnegie Mellon University Stanford University Pittsburgh, PA, USA Stanford, CA, USA


- M D Hurley, "Obstacle Avoidance Using Fuzzy Logic Approach;".

- Han Hongling, Yang Fenglei, "Path Planning of an Indoor Mobile Robot Navigated by Infrared;"


**Index Terms**

Computer Science Algorithms
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IR sensors