# Moving the body to interact with computers

– How can we control computers with our body?

– What methods of motion detection and analysis works with motion gaming?

– What types of motion-game design facilitates motion, health and well being in players?

At LiU Active Lab we do research on games and gasification of motion, learning and motivation in the areas of computer science, cognitive science, health and pedagogy. LiU Active Lab is a reach group but also and experimentation lab (gaming room) inside the science center Fenomenmagasinet located at Gamla Linköping (40 000 visitors per year).

To move the body is a natural activity for humans, like walking, dancing, using our arms and hands to interact with the world. To control a computer with such action and a precision to facilitate real gaming is still a challenge. Game design that works with our mind and body is also something not yet fully understood.

In our research we develop fully functional games for play with motion detection based on the camera feed from standard webcams. To evaluate our research we collect data and study the effectiveness of aspects of our motion detection algorithms and methods as well as game design elements such as mechanics, rules, goals, visual and auditory feedback as to how the affect the ability and willingness to play, both in the short term and the long term. Statistical analysis is at the heart of understanding and determining how to develop these games further to improve their effectiveness for the overall goal.

Contact:

Aseel Berglund

email: aseel.berglund@liu.se

Mobile: 0732-703862