



# MOBIUS FLOE

A 3D VIRTUAL REALITY GAME  
FOR PAIN DISTRACTION

FUNDED BY

Graphisme, animation et nouveaux médias  
**gano**  
Graphics, Animation and New Media



## MOBIUS WHAT?

Mobius Floe is an immersive virtual reality game designed as a tool to help chronic and acute pain patients lower their pain and anxiety. Patients are immersed in a virtual wintry setting where they hike through snowy paths and trails while experiencing action-packed encounters.



### DEVELOPMENT TEAM:

© SIMON FRASER UNIVERSITY PAIN STUDIES LAB: DR. DIANE GROMALA · DR. CHRIS SHAW ·  
AMBER CHOO · CHAO FENG · MARK NAZEMI · GILLIAN RAMSAY · XIN TONG · CHERYL YU  
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## PAIN DISTRACTION

Patients are presented with a world so captivating that it enables them to feel as if they are inside or part of the world itself. The game also includes many tasks that stimulate the patients' working memory and seek their constant attention, thus drawing the patients' focus away from their physical pain.

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Chronic Pain Research Institute, SFU  
GRAND-NCE

For more information or to  
participate in research studies,  
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# GROMALA'S WEATHER

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# gromala's weather wearable system

to facilitate communications between a chronic pain patient and her/his collaborators

The uncertainty of pain experience can easily interrupt the lives of chronic pain patients. This common occurrence can also inhibit positive communication and collaborations. So researchers in the Pain Studies Lab explored this affective design space and developed a wearable computing system with a real-time biofeedback display to monitor the patient's varying condition. The goal is to enable the selected people that the patient communicates with to develop better and more responsive strategies for the collaboration by getting updates on the patient's variable physical condition.

## development team

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## what weather?

There were four visual encodings in the wearable that only the patients' selected colleagues, friends or families understand, but that strangers do not:

1. A "red button" day (cannot be available or present at all)
2. Bad weather (in a bad physical condition)
3. Normal weather (in a regular status) and
4. Good weather (good status).

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# VIRTUAL MEDITATIVE WALK



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# virtual meditative walk

virtual reality for chronic pain self-management



An innovative virtual reality (VR) system that combines VR with biosensors teach chronic pain patients Mindfulness-based Stress Reduction (MBSR). Clinical studies show that MBSR reduces pain levels, stress, anxiety and improves our immune system. Studies also prove that VR is an ideal training method and is as effective as opioids for reducing pain.

## development team

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