Non-Newtonian Slippery Liquid Infused Porous Surfaces using the lattice-Boltzmann algorithm

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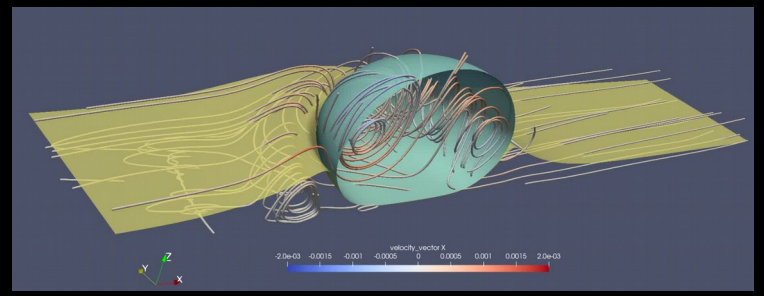
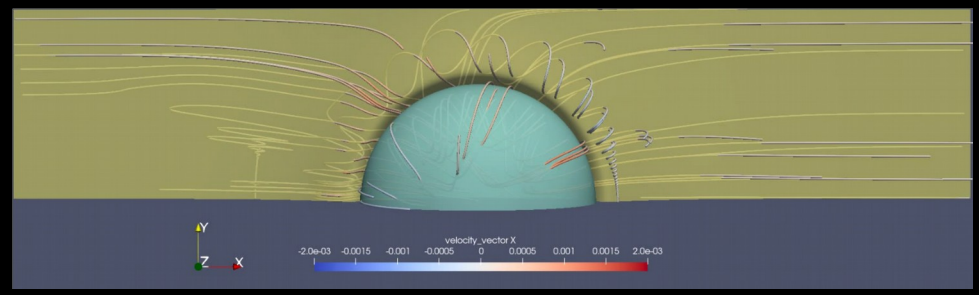
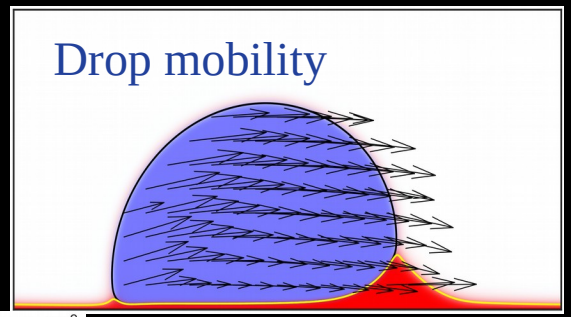
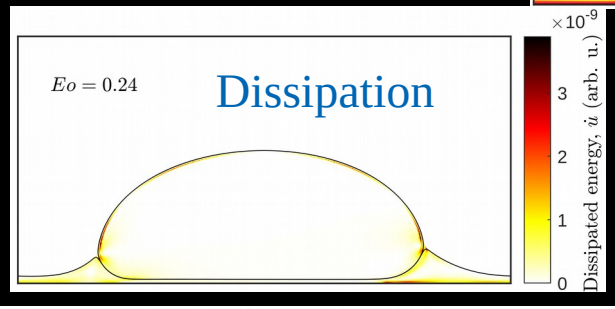
```
//-----------------------------------------------------------------//
//                                                                 //
//        TERNARY LATTICE BOLTZMANN CODE (HIGH DENSITY).           //
//                                                                 //
//                 Code developed and maintained                   //
//            by Ciro Semprebon and Halim Kusumaatmaja             //
//                                                                 //
//             ciro.semprebon@northumbria.ac.uk                    //
//             halim.kusumaatmaja@durham.ac.uk                     //
//                                                                 //
//-----------------------------------------------------------------//

#ifdef PARALLEL
#include <mpi.h>
#undef  SEEK_SET
#undef  SEEK_CUR
#undef  SEEK_END
#endif

#include <fstream>
#include <iostream>
#include <math.h>
#include <stdlib.h>
#include <iomanip>
#include <sys/time.h>

#include "RT_Timer.hh"
#include "String.hh"

#include "code_definitions.hh"

int main(int argc, char **argv)
{

// ##################################################################
/* Define the no of processors and processor ID                    */
// ##################################################################

#ifdef PARALLEL
  MPI_Init(&argc, &argv);
  MPI_Comm_size(MPI_COMM_WORLD, &nbPE);
  MPI_Comm_rank(MPI_COMM_WORLD, &myPE);
```



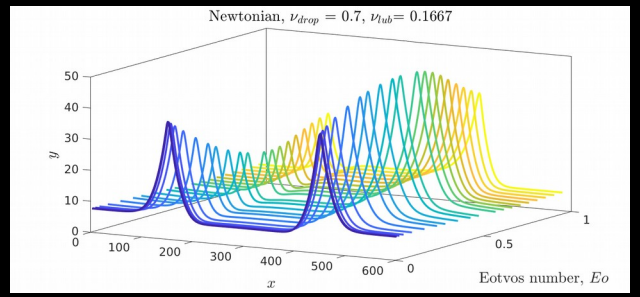


300 lb. u.

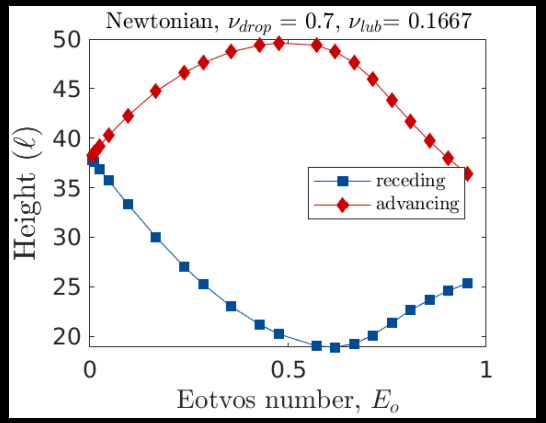


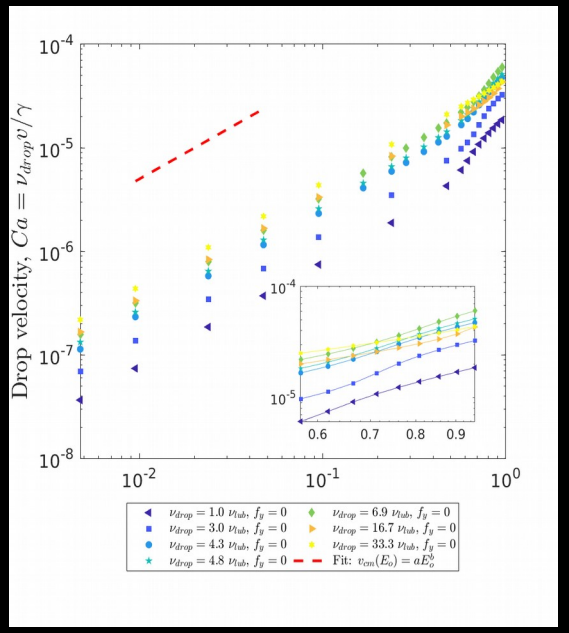


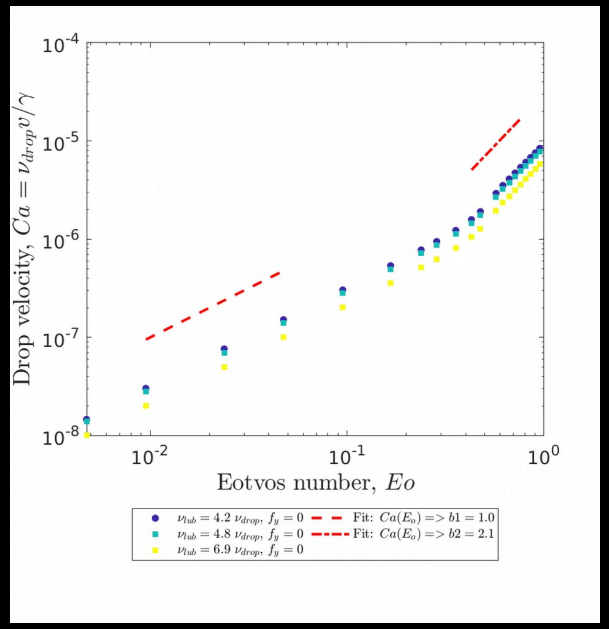
600 lb. u.



Menisci height:





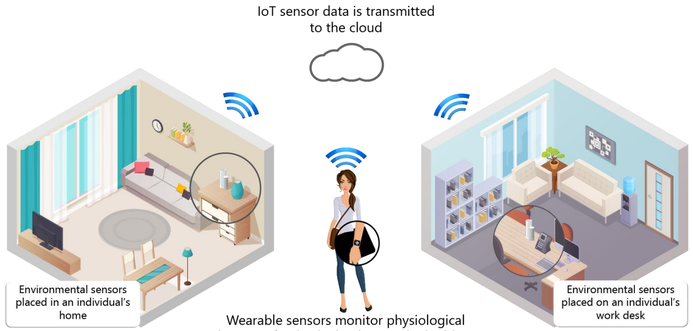


Research Assistant (2015)

XBIM | Northumbria University NEWCASTLE | bimacademy

Researched and applied machine learning principles for identifying 3D building assets within open standard Building Information Models.

Ph.D. Student (2018 - Present)



Northumbria University NEWCASTLE | European Union European Regional Development Fund | Ryder

Currently researching the use of passive Internet of Things sensors, computer science and wearable devices to measure a spectrum of environmental parameters and health pathologies.

CIS Student (2014)

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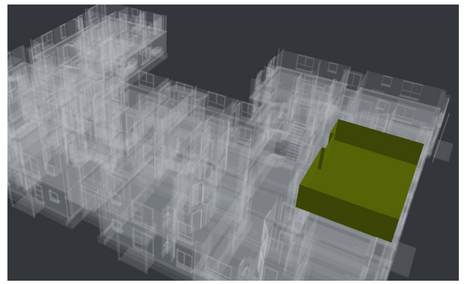
Computer Scientist / BIM Consultant (2016 – 2018)



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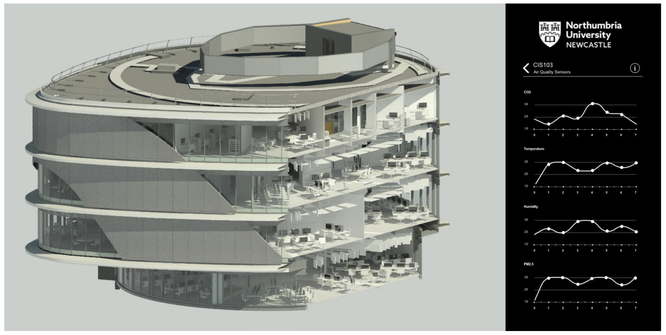
Researched and applied machine learning principles for identifying 3D building assets within open standard Building Information Models.

Senior Technician (Present)



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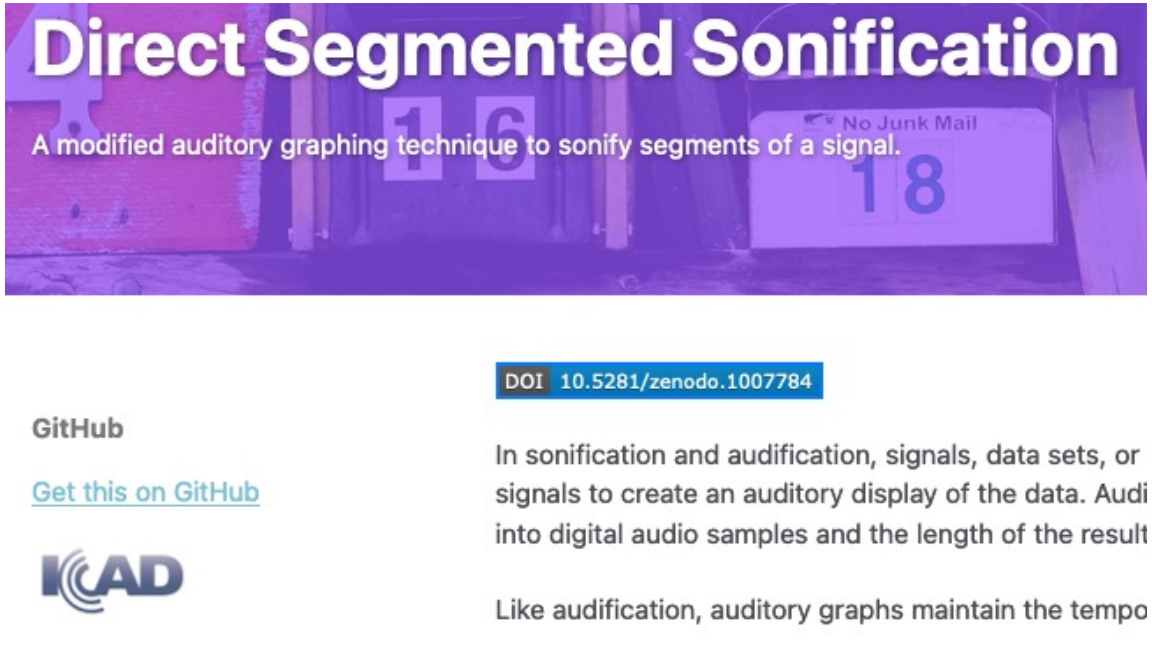
Currently undertaking research and development of a digital sensor platform to transform CIS sensor data into a live research asset. Also providing ongoing technical & research support to CIS.

Paul Vickers – Professor of Computer Science and Sonification

- Languages: Python, Pure Data, Max/MSP, SuperCollider, …
- Code repositories: GitHub – https://github.com/orgs/nuson/, https://github.com/projectRadical, https://github.com/paulvickers
- Jekyll: for websites – https://paulvickers.github.io/, https://projectradical.github.io/
- Zenodo: to add DOI to GitHub repositories – DOI 10.5281/zenodo.1007784