



From Science to Software: My first year in Research Software Development

Chris Dearden and Mark Richardson

University of Leeds, School of Earth and Environment, Centre for Environmental Modelling and Computation, Leeds, United Kingdom (c.dearden@leeds.ac.uk)

As a numerical modeller working in atmospheric science, research software and high performance computing have been integral to my career over the last decade. After achieving my PhD from the University of Manchester in 2011, I became a post-doctoral Research Fellow before moving to the University of Leeds in January 2018 to start a new role as a Software Development Scientist within the Centre for Environmental Modelling and Computation (CEMAC; www.cemac.leeds.ac.uk). CEMAC is a relatively new initiative, established in 2016, with the vision to significantly enhance and accelerate high impact research in weather, climate and atmospheric composition, and to train and educate a new generation of students and scientists in the latest techniques in scientific computing, data processing & visualisation.

In this talk, I will provide an overview of my experiences from my first year in CEMAC, and how I have made the transition from science domain to software developer. I will discuss how a CEMAC 'SDS' differs from a conventional research software engineer, and present examples from some of the technical projects that I have worked on, including the new skills, techniques and collaborations (particularly with the UK Met Office) that I have developed along the way. I will conclude with a discussion of some of the challenges I have faced and how we have overcome them to deliver clear benefits to research and teaching within the School of Earth and Environment at Leeds.