

Mr. David García in his capacity as Executive Director, Software Development of Aimsun SL, a company organised and existing under the laws of Spain, with registered address at Ronda Universitat, 08007 Barcelona, Spain, with Tax Identification Number B-61504775,

CERTIFIES THAT:

Mr. Serbu Calin, from Technical University of Cluj-Napoca, has attended the course “Simulating with Aimsun Next” and “Multi-resolution modelling and advanced calibration of dynamic models in Aimsun Next” organised by Aimsun and held in Barcelona from 19 to 23 November 2018, with a total duration of 37 hours and 30 minutes.

This course covered the following topics:

Day 1 - Editing - Scenarios – Revisions - Outputs

Day 2 - Outputs - Traffic Management - Dynamic Traffic Assignment

Day 3 - Dynamic modelling and calibration – Microscopic network loading - Mesoscopic and hybrid network loading

Day 4 - Macroscopic, mesoscopic and microscopic modelling – Hybrid simulation – Static and dynamic cost functions – Path calculation techniques – Demand preparation – Multi-resolution modelling project workflow

Day 5 - Calibration workflow – Procedures to estimate calibration parameters – Validation criteria – Importing real data – Statistic indicators to compare simulation outputs to real data

In witness thereof, it is signed in Barcelona this Tuesday, 27 November 2018.



David García

Executive Director, Software Development