

Air Quality Monitoring Wireless System

Graziano A. Manduzio, PhD student

University of Florence

April 12, 2021

supervisors: Giorgio Battistelli, Luigi Chisci and Nicola Forti

Emission rate model

$$E_i = \frac{e_i f_i}{A_i}, i = 1, \dots, N_e \quad (1)$$

where:

$ppm = gveh./m^3$ is the unit measure of pollutant concentration

ut is the temporal unit

N_e is the total number of source elements

e_i is the emission factor of the i th element of the mesh, evaluated in g/m

f_i is the vehicle flow of the i th element, evaluated in $veh./ut$

A_i is the i th-element area, evaluated in m^2

E_i is the emission rate of the i th element, evaluated in ppm/ut