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DATA"; ""3.3 DESCRIPTION OF THE DYNAMIC MODEL"; ""3.4 INTEGRATION OF THE DYNAMIC MODEL WITH GIS""  
""3.5 SPREADSHEET TOOLS AND GISFigure 13. Calculation of the dynamic model in the environment of a spreadsheet and data connection among the spreadsheet, the GIS or the external relational spatial database.Compartment models described by ordinary differential equations can be solved with macros, which implement algorithms for numerical calculation (Eulcr, Runge-Kutta). In spite of a lower efficiency of calculation, a wide use of the spreadsheet programs, built-in""""3.6 ARCGIS DEVELOPMENTS TOOLS""; ""3.7 INDIVIDUAL PROGRAMS DEVELOPED WITH GIS PROGRAMMING LIBRARIES""; ""4. CONCLUSIONS""  
""ACKNOWLEDGMENTS""""REFERENCES""; ""SPATIO-TEMPORAL MODELING OF THE DUST EMISSIONS FROM AN OPENCAST COAL MINING AREA""; ""ABSTRACT""; ""1. INTRODUCTION""; ""2. EMISSION SOURCES""; ""3. REMOTE SENSING, GPS AND GIS""; ""4. DISPERSION MODELING IN THE FRAMEWORK OF GIS""; ""5. VISUALIZATION OF SPATIO-TEMPORAL DATA""; ""6. A CASE STUDY OF THE SELECTED OPENCAST MINING AREA""; ""6.1. Mapping of the Dust Emission Sources""; ""6.2. Sharing Data between Dispersion Modeling Tools and GIS""; ""6.3. Visualization of Spatio Temporal Data in GIS""; ""7. CONCLUSION"";  
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""SPATIAL MODELING AND OPTIMIZATION OF MUNICIPAL SOLID WASTE COLLECTION IN URBAN REGIONS""

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#### Sommario/riassunto

This text provides leading-edge research on environmental modelling with GPS. It is demonstrated by a number of environmental case studies that, in addition to environmental modelling, include the latest research on remote sensing, GPS, and database management.

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