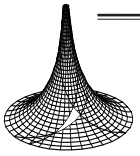

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Teaching
Mathematics and
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Various systems in a single mathematical model

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Abstract. Our aim is to study differential equations and systems described by them which have great historical importance and are considered to be fundamental on different levels of education.

Due to their simplicity these are suitable for those who deal with this topic and want to gain useful experience in this field.

Furthermore, our aim is to give these equations a general form which facilitates the studying of the different models by computer even for an individual programmer. At the same time it facilitates the use of different mathematical auxiliary-programmes.

By giving the equations this way we get a chance of studying the relations between the individual systems.

Key words and phrases: nonlinear differential equation system, growth model, combat model, prey-predator model, oscillation.

ZDM Subject Classification: I70, M50, M60, R90.

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