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# GLOBAL-IN-TIME REGULAR UNIQUE SOLUTIONS WITH POSITIVE TEMPERATURE TO THE 1D THERMOELASTICITY

**Piotr Michał Bies**

In the talk, we shall say about the construction of unique regular solutions to the minimal nonlinear system of the 1d thermoelasticity. The obtained solution has a positive temperature. Our approach is based on an estimate using the Fisher information, which seems completely new in this context. It is combined with a recent inequality for the temperature and embeddings, which allows us to obtain a new energy estimate. The latter is used in a half-Galerkin procedure yielding global solutions. The uniqueness and further regularity of such solutions are obtained.

Piotr Michał Bies, Faculty of Mathematics and Information Sciences, Warsaw University of Technology  
e-mail : [piotr.bies@pw.edu.pl](mailto:piotr.bies@pw.edu.pl)

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