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Lectures on mathematical combustion. (English) Zbl 0574.76001

CBMS-NSF Regional Conference Series in Applied Mathematics 43. Philadelphia, PA: Society for Industrial and Applied Mathematics (SIAM) (ISBN 0-89871-186-X). viii, 126 p. (1983).

The authors have done a good job by publishing these ten lectures on mathematical theory of combustion which were delivered at a regional conference in USA. In the first lecture some short introduction to combustion is given. In the second lecture, governing equations of the flames under different conditions are presented. In the remaining eight lectures, the solutions, most analytic, are presented. The authors have indicated many problems in this field which need numerical solutions and hence, engineers, research workers in this field will find this book most useful. It is most important to remember that all these lectures are based on the papers published during the last five years. Hence, this book along with the authors' other book "Theory of laminar flames" (1982; [Zbl 0557.76001](#)) will be found most useful to fluid-mechanics community as a source book for further investigations.

Reviewer: [V.M.Soundalgekar](#)

MSC:

[76-02](#) Research exposition (monographs, survey articles) pertaining to fluid mechanics Cited in **24** Documents

[80A25](#) Combustion

Keywords:

[combustion](#); [governing equations](#); [flames](#)