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Jean Baptiste Joseph Fourier
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# The Analytical Theory of Heat

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THE

# ANALYTICAL THEORY OF HEAT

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# PREFACE.

In preparing this version in English of Fourier's celebrated treatise on Heat, the translator has followed faithfully the French original. He has, however, appended brief foot-notes, in which will be found references to other writings of Fourier and modern authors on the subject: these are distinguished by the initials A. F. The notes marked R. L. E. are taken from pencil memoranda on the margin of a copy of the work that formerly belonged to the late Robert Leslie Ellis, Fellow of Trinity College, and is now in the possession of St John's College. It was the translator's hope to have been able to prefix to this treatise a Memoir of Fourier's life with some account of his writings; unforeseen circumstances have however prevented its completion in time to appear with the present work.

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## ERRATA.

Page 9, line 28, *for* III. *read* IV.
Pages 54, 55, for $k$ read $K$.
Page 189, line 2, The equation should be denoted (A).
Page 205, last line but one, for $x$ read $X$.
Page 298, line 18, for $\frac{du}{dr}$ read $\frac{du}{dx}$.
Page 299, line 16, for *of* read *in*.
,, ,, last line, *read*

$$\int_0^\pi du\, \phi\,(t \sin u) = \pi\phi + tS_1\phi' + \frac{t^2}{\lfloor 2} S_2\phi'' + \&c.$$

Page 300, line 3, *for* $A_2$, $A_4$, $A_6$, *read* $\pi A_2$, $\pi A_4$, $\pi A_6$.
Page 407, line 12, for $d\phi$ read $dp$.
Page 432, line 13, read $(x-a)$.