BOOK REVIEWS

A Diary of Sir Asutosh Mookerjee.
Asutosh Mookerjee Memorial Institute,
77, Asutosh Mookerjee Road, Calcutta
700 025, India. 237 pp. Price: Rs 150.

It is difficult to categorize Asutosh
Mookerjee. How do you categorize a
person who writes over twenty research
papers on mathematical issues, is
elected to the most prestigious interna-
tional mathematical societies, about
whose mathematical prowess it is said
'If he had made up his mind to devote
himself entirely to the study of mathe-
matics, he was sure to have secured a
place in the front rank of world mathe-
maticians', and yet becomes a High
Court judge? How do you categorize
'one of the greatest judges of modern
India' whom 'Specialists in most di-
verse literary and scientific subjects
would find... familiar with the latest
relevant literature'? How do you cate-
gorize a hard person who 'never shrank
from braving the frowns of the mighti-
est in the land', bleeding his heart over
wounding people's feelings in small
matters? It was perhaps as well that this
man became the Vice-Chancellor of
Calcutta University. For only a man so
hard to categorize, only a man of such
amazing versatility, only a man with so
many facets to him and so many planes
of understanding human quest, could
have 'touched the Calcutta University
with a magic wand of his creative will,
in order to transform it into a living
organism belonging to the life of the
Bengali people'. This man, so difficult
to pigeonhole as it is, would have added
yet another facet to his already dazzling
personality by joining politics. An un-
timely death robbed him of this desire.

Although the title suggests that this is
just one of the diaries Asutosh kept,
there is no such reassuring information
inside the book. This diary does not
deal with the already great Asutosh.
Rather it is written by an Asutosh on his
way to greatness. As such, it is a verita-
ble blue-print of how to achieve great-
ness. It is very simple. One has to get
up everyday around 4 am and go to bed
around 10 pm. In these, roughly 18 h,
one has to read subjects as diverse as
Sanskrit literature and geometry, Eng-
lish literature, jurisprudence, molecular
mechanics, astronomy, biographies,
metaphysics, literary criticism, algebra,
philosophy, history, religion, occult,

anthropology, etc. at quite an advanced
level and through source books directly.
One has to teach a few of the above
subjects to those who are desirous and
deserving. One has to go to the college,
fight for social causes, raise voice
against unreasonable rules or changes in
rules, write petitions/letters to the
newspapers, cater to the needs of
friends and walk briskly for one hour.
This, one has to do everyday whether
one is hearty or ill, in a good frame of
mind or disturbed, tired or perky. Of
course, the above is in addition to one's
being exceptionally gifted and intelli-
gent.

This is one of the most cryptic diaries
that this reviewer has seen. So cryptic in
fact, that the significance of many jot-
tings is completely lost on the reader
unless he happens to have read about
Asutosh's life from other sources. The
book, as it is published, opens with a
life-sketch of Asutosh Mookerjee by his
son, Syamaprasad Mookerjee and ends
with another sketch by an anonymous
author. Well written as these two pieces
are, they are of no help in resolving the
confusion of the reader about the
abrupt, introduction-less, explanation-
less, treatment of many of the events
and deeds that can throw welcome light
upon the developing character of this
great man. This is so because none of
the pieces touch the period that this
diary pertains to. The first piece deals
mainly with an Asutosh who is already
great while the end piece deals with an
Asutosh who is a child and a naughty
one at that. Perhaps the publishers de-
liberately have structured it this way.
Perhaps it was their idea that this would
extend an otherwise limited period diary
to a more life-size representation. Al-
though that intention cannot be faulted,
it would much rather that the diary
came along with more detailed endnotes
about the main events mentioned in it.
That would have enhanced the value of
the book enormously and would have
been of immense use to those ignorant
about Asutosh's life while not losing
any of its charm for the researcher
studying the illustrious life. Of course,
the first piece by Syamaprasad Mooker-
jee could have been retained.

There are three appendices. The first
appendix deals with the persons and
events mentioned in the diary. The sec-
ond lists the then professors in the
Presidency College, and the third is a

detailed list of the books mentioned in
the diary. At the very end is a brief
chronology of important events in the
subject's life and, curiously enough, his
horoscope. All this, especially the first
appendix and the chronology, is of
much help in understanding many of the
entries that would otherwise have re-
mained obscure. However, it still leaves
much to be desired as it does not shed
any light on several of the events.

Who should read this diary? Is there a
select audience after all? Much as I
know that the book may inspire the
younger generation to work hard, to
fight for social causes, and, above all, to
have a code of values in all that they do,
I feel that the diary definitely should be
read by a certain group of people. That
group of people which was probably the
nearest to Asutosh's heart, that group of
people with which Asutosh lived even
when he may have been physically
away. That group of people which calls
itself the University.

A certain J. A. Martin taught mathe-
matics at the Presidency College. What
kind of a teacher he must have been is
evident from the fact that there are as
many as 12 references to him in a space
of 23 pages. All of them derogatory.
'Martin. . . is decidedly inferior to
Booth in knowledge, intelligence, in
everything'. 'Martin. . . has a stagnant
intellect'. 'Martin is doing nothing, and
wasting my time'. 'I am utterly tired of
Martin'. Finally there is this entry
which I find the most damaging. 'Mar-
tin is very fond of trilinear, because he
has secured Whitworth and imagines
fondly that no one else has got the
book'. When Martin falls ill and has to
take a long leave, there is a hint of cele-
bration in Asutosh's words. This is not
cruelty. This is discernment. A good
student requires and craves for a good
teacher. The admiration he expresses for
William Booth can be contrasted with
the barely concealed anger towards
Martin. In between lies his toleration of
McCann.

This diary should be read by teachers,
both good and bad. Good teachers, so
that they can stay on course. Bad, so
that they realize that there may just be
many pupils in their classes who have
the same sentiments for them that Asu-
tosh had for Martin.

This book should be read by the Vice-
Chancellors. How many of them, from
their hearts, can say the following: 'Fel-

low-graduates, you speak of this University as your Alma Mater. Do you always realize the nobility of this commonplace expression? What a singular endearment it voices – our fostering mother – what a fine relation is that for a great institution of learning to bear to all those who throughout the years have learned wisdom at her feet and have gone into the world, sustained by her strength and inspired by her lofty example... councils will come and go, ministers will blossom and perish... But your University, my University, will live on for ever, if her children by thousands and ten-thousands stand by her with steadfast loyalty and devotion.' It was with this steadfast loyalty and devotion that Asutosh served Calcutta University and, perhaps other Universities too, by setting an example. In these days when Universities have become dens for undesirable elements, when scams (financial or otherwise) are the order of the day, when higher authorities of the Universities kowtow to the wishes of political bosses, and when, ironically enough, we talk of becoming a world power, how many of the Vice-Chancellors can come up to Asutosh's ideal? If they cannot, how do we even dream of becoming a world power? I do not think it needs emphasis that the powers that be are powers only because they have assiduously nurtured knowledge and the men who created knowledge.

It is here that the diary has immense value. Asutosh foresaw the danger that his personal diaries could become published. He was opposed to the idea and so guarded his diaries under lock and key. If this published diary is able to convert a single Vice-Chancellor or a single teacher, it would have served its purpose and absolved the publishers and the readers of the sin of rubbishing the wishes of a great man when he ceased to exercise power over his possessions.

With all the shortcomings that it has, I would still like to congratulate the publishers for coming out with a book that has so few spelling/editing mistakes, which is not very unreasonably priced, and which may be a very good tool in the hands of future biographers of this venerated man.

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Computational Physics: An Introduction. R. C. Verma, P. K. Ahluwalia and K. C. Verma. New Age International Publishers, 4835/24, Ansari Road, Darya Ganj, New Delhi 110 002, 1999. Rs 250. 377 pp.

The book under review can supplement a standard physics course at pre-university or bachelor's level with material using numerical methods. It introduces the student to programming in Basic. One of the salient features of the book is that it gives the algorithms behind the computer programs used. Integration and differentiation by numerical methods is something which students do not find easy to do. Consequently, many students do not venture to write computer programs in physics or chemistry. This book presents the numerical methods and explains them well. Armed with this, even an average student with an introduction to programming can write interesting programs to solve problems in physics and chemistry. The computer is a powerful problem solving tool and the student trains to use it in toy problems like a research scientist or engineer. It allows a sledge-hammer approach to real problems where laws of physics are used in a pure raw form without recourse to simplification for reasons of analytical convenience and without waiting for sophisticated mathematical techniques that one learns later. The book is a good attempt at providing the student an integrated introduction to programming, numerical methods and physics and is strongly recommended for adoption in various courses in the country. Though we are appreciative of the general structure of the book, there are matters of details that could profitably improve the book in the future editions. Since we would hope to see more editions of the book in the future, we list these shortcomings in detail both for the benefit of the authors and the other potential users of the book.

♦ Though in a project like this it is impossible to cover all aspects of all the topics, we find several instances where we feel that a little more detailed treatment is definitely necessary. Magnetism, for instance, is not taken up in as much detail as 'Waves' or 'Falling bodies'.

♦ One of the problem areas for students in solving problems is the one that concerns 3-D visualization. It is perhaps here that the computer is ideally suited to assist students think in terms of 3D. Unfortunately, there are not many problems that pertain to this. May be in a future edition the authors can include such problems, especially, waves in 3D.

♦ There is a lot of scope to improve the presentation of graphics. The authors have selected SCREEN2 resolution in most of the programs. Graphics look pleasant in SCREEN9 or SCREEN13. For instance, PROG51.bas looks pleasant in SCREEN9. But making changes in the screen resolution is not easy because the coordinates have to be worked out again. This, of course, can be one of the advanced excercises for the student.

♦ More seriously, data validation has not been carried out in most of the programs. Therefore, any value that is input is accepted and the calculations carried out accordingly. This sometimes leads to results that cannot be interpreted. In some cases, the animation goes beyond the screen limit set. It is better to provide a range of data that a user can give in a program. There are also instances, for example in the program CH10P1.bas, for some values 'division by zero error' occurs. In CH2P1.bas, for some values the maximum range calculated is negative. It is better to avoid such outputs. This is an important aspect of programming that the student must learn.

♦ The speed with which animations are carried out depends on the speed of one's computer. There are animations in this book, like the one on Brownian Motion, which are executed so fast that one cannot even notice the progress of the graph or the path of a particle. A good programming procedure is to give a delay loop in which one can select the delay time.

♦ It is very important to mention the units when the data is accepted from the user. Then, it is pretty easy for the user to interpret the solution or graph. But most *programs* do not mention units at all. Though the *text* mentions the units, it is still a good