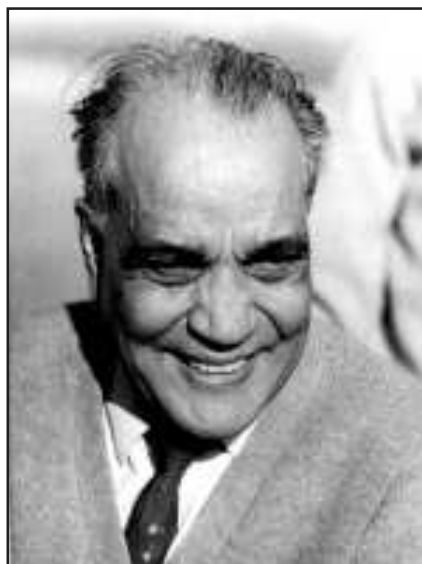


## UNESCO – Kalinga Prize Winner – 1963

**Jagjit Singh**

**[The Great Indian Science Writer & Science Popularizer]**

**Asia's First Kalinga Prize Winner**



*Jagjit*

[ Birth : 15th May 1912 at Amritsar in Punjab (India)

Death : New Delhi, 27.09.2002 ]

*Dear Dr. Mishra, Received your letter a few days ago.  
Thanking you very much for it and enclosed  
herewith is a copy of my Biodata along with  
Kaisport size photograph as requested with best regards  
yours Jagjit Singh.*

## BIOGRAPHICAL NOTE

### Jagjit Singh

#### [Great Indian Science Writer & Science Popularizer]

Jagjit Singh (1912-2002) was an Indian writer and science popularizer. In College he excelled in mathematics courses, yet made his career as an important director of India's railways, applying his mathematical skills there. Upon retirement, he set out in writing several books, starting with *Great Ideas of Modern Mathematics*, popularizing science and targeting laymen. Singh subsequently won the Kalinga Prize in 1963, the first Asian to be so.

In 1960, he was appointed director of the Indian Railway Board, and nine years later he was appointed general manager of the North-East Frontier Railways. After his retirement he went to work as was managing director of the Indian Drugs and Pharmaceuticals, adviser of Asian Development Bank and adviser of Tata Chemicals.

Singh was elected a Fellow of the Royal Statistical Society and awarded an honorary Doctorate in Science by Roorkee University. He was also chosen by Pakistan scientist and Nobel Prize winner in Physics in 1978, Abdus Salam to write his biography.

#### Works :

- Great Ideas of Modern Mathematics
- Great Ideas and Theories of Modern Cosmology
- Great Ideas in Information Theory, Language and Cybernetics
- Reminiscences of a Mathematician Manqué

#### References :

Biographical note (<http://www.tribuneindia.com/2003/20030208/windows/above.htm>)  
Retrired from "[http ://en.wikipedia.org/wiki Jagjit\\_Singh\\_%28 Writer%29](http://en.wikipedia.org/wiki/Jagjit_Singh_%28Writer%29)"

## Jagjit Singh

### A Brief Biographical Profile

<b>Jagjit Singh</b>	:	Mathematician, Statistician
<b>Born</b>	:	Amritsar, India, May 15, 1912,
<b>Son of</b>	:	Harcharan Singh & Durga Devi
<b>Equcational Qualification :</b>		<b>BA</b> - Govt. College, Lahore, Punjab University 1931 <b>MA</b> - 1933 <b>D.Sc.</b> – Honourary, Roorkee Universtiy, 1969.
<b>Wife</b>	:	Harbans Kaur – May 7, 1933 (Date of Marriage)
<b>Children</b>	:	Raj Bhalla, Jatinder Singh, Rita Mathur.
<b>Service</b>	:	Indian Govt. Railways Administrative service, 1936-69 General Manager , South Eastern Railway 1967-1969 Chairman, Indian Drugs & Pharmaceutical Ltd(IDPL) 1969-1973
<b>Consutatant</b>	:	Asian Dev. Bank 1972, 1973
<b>Joint Secretary :</b>		Indian statistical Institute , 1971-1974,
<b>Vice Chairman:</b>		Indian Statistical Institute , 1974-1976
<b>International Award</b>	:	<b>Recipient of Kalinga Prize , UNESCO –1963</b>
<b>Fellow</b>	:	Royal Statistical Society, Institute of Mathmatical Statistics
<b>Members</b>	:	Opertions Research Society India, (Past President) Clubs : Calcutta, Delhi Gymkhana
<b>Author</b>	:	Mathematical Ideas Modern Cosmology Operations Research Great Ideas of Information Theory Language & Cybermetics Some Indian Eminent Scientists The story of our Railway Statistical Aids to Rly Operations
<b>Also</b>	:	Research Papers . Editorial Board Science Reporter
<b>Home</b>	:	D- 943 New friends colony Mathura Road New Delhi – 110065 , India
<b>Death</b>	:	27.9.2002 at 7 pm at New Delhi Resident

#### Source :

Who's Who in the World  
3<sup>rd</sup> Edition 1976-1977.  
Marquis Who's Who  
Marquis Who's Who Inc  
200 - East Ohio Streat, Chicago,  
Illinois, 60611, USA.



## BIO-DATA OF MR. JAGJIT SINGH

<b>Date of Birth :</b>	15 <sup>th</sup> May 1912 at Amritsar in Punjab (India).
<b>Address :</b>	D-943 New Friends colony Mathura Road New Delhi-110065 Tel:011-26314015(R)
<b>Academic Qualification :</b>	<ul style="list-style-type: none"><li>(a) M.A. in Mathematics (1933), Punjab University, Lahore (now in Pakistan)</li><li>(b) D.Sc. (Hons. Causa), Roorkee University (1968) for outstanding work in science popularization and Operations Research.</li><li>(c) Fellow of Royal Statistical Society, London.</li><li>(d) Member, Indian Statistical Institute, Calcutta.</li><li>(e) Past President of the Operations Research Society of India.</li></ul>
<b>Positions Held :</b>	<ul style="list-style-type: none"><li>(a) Joined the Administrative Service of the Indian Government Railways in 1936.</li><li>(b) Director, Railway Board, Ministry of Railways 1960-65.</li><li>(c) General Manager, North East Frontier Railway 1965-66.</li><li>(d) General Manager, South Eastern Railway 1966-69.</li><li>(e) Chairman &amp; Managing Director, Indian Drugs &amp; Pharmaceuticals Ltd., A Govt. of India Undertaking and the largest pharmaceutical company in India 1969-73.</li><li>(f) Consultant to Asian Development Bank, Manila, for appraising their South Asian Transport Survey (1972).</li><li>(g) Chairman, Editorial Board of Science Reporter, a monthly Science popularization magazine published by the Indian Council of Scientific and Industrial Research (1963-65).</li><li>(h) Adviser, Operations Research, Govt. of India (1960-65).</li><li>(i) Advisor, Scientific Research to Indo-Burmah Petroleum Company 1976-78.</li><li>(j) Consultant, to University of Texas, Austin, Oct. 1978-Feb. 1979.</li><li>(k) Chairman, Statutory Committee, Indian Statistical Institute 1979-82.</li><li>(l) Member, Indian Statistical Institute (ISI). The Second Review Committee 1982-83.</li><li>(m) Director, Research, UNDP Project for Regional Cooperation between Bangladesh, Bhutan, Nepal, India, Pakistan and Sri Lanka on develop of Transport and Telecommunication Linkages between these countries (1980-85).</li></ul>

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## Glossary on Kalinga Prize Laureates

- (n) Adviser, Operation Research, Coal India (a Govt. of India Undertaking) (1984-85).
- (o) Member, Steering Committee for Transport , Planning Commission (1985-88).
- (p) Member, Steering Group for formulation of Transport Programmes for the Eighth Five Year Plan (1986-90).
- (q) Invited by Director, International Centre for Theoretical Physics, Trieste, set up under the auspices of the International Atomic Energy Agency (IAEA) to come to Trieste to write a biography of Abdus Salam, who won Nobel Prize for Physics in 1979. The biography was published by Penguins India (1990-92).

### Present Assignment :

Consultant to Tata Chemicals Ltd., Bombay on

#### **EVOP Techniques**

Material Handling Systems and Transport Problems

#### **Energy Conservation**

(A fireless shunting loco has been built and already working in the plant marshalling yard and two more are under construction. (Held since 1979).

### Science Popularisations :

He is the first Asian to receive UNESCO's Kalinga Prize in 1963 for writing many articles in such papers as the Illustrated Weekly, Times of India, Hindustan Times etc., and books to popularize science "concentrating his efforts to improve the layman's understanding of the fundamental principles of mathematics, astrophysics, cosmology (particularly Einstein's concept of relativity and space-time), information theory underlying the construction of natural and artificial automata such as the human brain and the computers respectively, genetics, quantum chemistry, operations research, life sciences, geology etc." Other previous winners of the Prize are such eminent popularizers as Louis De Broglie, Julian Huxley, Bertrand Russell, George Gamow, Ritchie Calder and Arthur Clarke.

### Books written :

See List attached (Annexure – I)

### Technical Papers Published :

See list attached (Annexure II)

## LIST OF BOOKS AND THEIR PUBLISHERS

1. **Mathematical Ideas – Their nature and use**  
(Published by the Hutchinson publishing Group, 178-202, Great Portland St., London W.I. and Dover Publications Inc., 180, Varick Street, New York – 14).
2. **Modern Cosmology :**  
(Published by M/s. Dover Publications Inc., 180, Varick Street, New York 14 and Penguin Books Ltd., London. Also translated into Dutch by Aula-Broken, Antwerp.).
3. **Great Ideas in Information Theory, Language and Cybernetics :**  
(Published by M/s. Dover publications Inc., 180, Varick Street, New York 14. Also translated into Italian, Japanese and Spanish).
4. **Great Idea of Operation Research :**  
(Published by M/s. Dover publications Inc., 180, Varick Street, New York-14, and Penguin Books Ltd., London. Also translated into Japanese and Italian).
5. **Some Eminent Indian Scientists : (**  
Published by publications Division, Ministry of Information & Broadcasting, Govt. of India, Patiala House, New Delhi).
6. **Story of our Railways :**  
(Published by the National Book Trust of India, A-5, Green Park, New Delhi-16 for Children in Nehru Balpustakalaya Series).
7. **Statistical Aids to Railway Operations :**  
(Published by M/s. Asia Publishing House, Calicut Street, Bombay).
8. **An Intellectulal & Cultural History of the Western World :**  
This is a joint work by a number of American eminent authors. Mr. Jagjit Singh is the only non-American invited and has contributed two chapters entitled 'Mathematics Today' and 'Relativity and Cosmological Revolution'.
9. **Memoirs of a Mathematician Manque :**  
(Vikas Publishing House Pvt. Ltd., 5, Ansari Road, New Delhi).
10. **Frontiers of Life Sciences :**  
(Sangam Books, New Delhi).
11. **The World of Science & Technology in 2000 A.D. :**  
(Published by the Publications Division of the Information Ministry, Patiala House, New Delhi).
12. **Great Ideas of Modern Genetics :**  
National Book Trust of India, New Delhi.
13. **Abdus Salam : A Biography :**  
(Published by Penguins India Ltd.).
14. **Reminiscences of a Mathematician Manque : (**  
Published by Har-Anand Publications, 364A, Chirag Delhi, New Delhi – 110017).

## LIST OF BOOKS AND THEIR PUBLISHERS

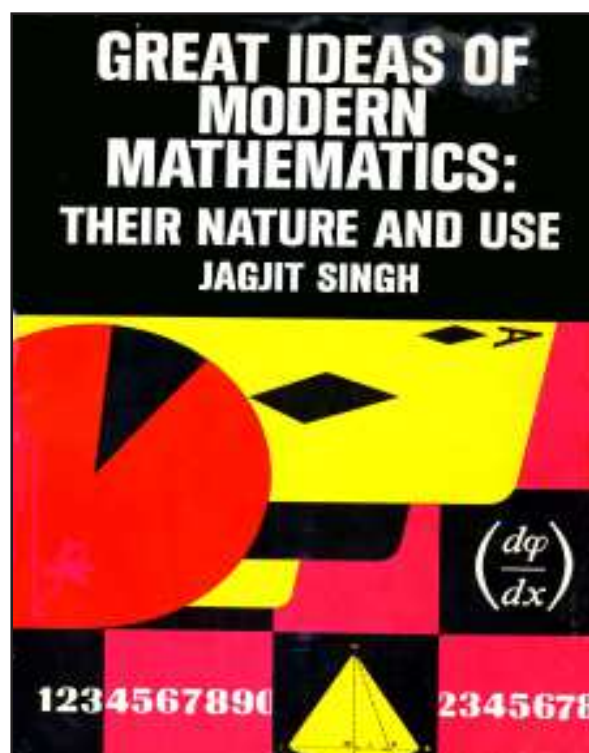
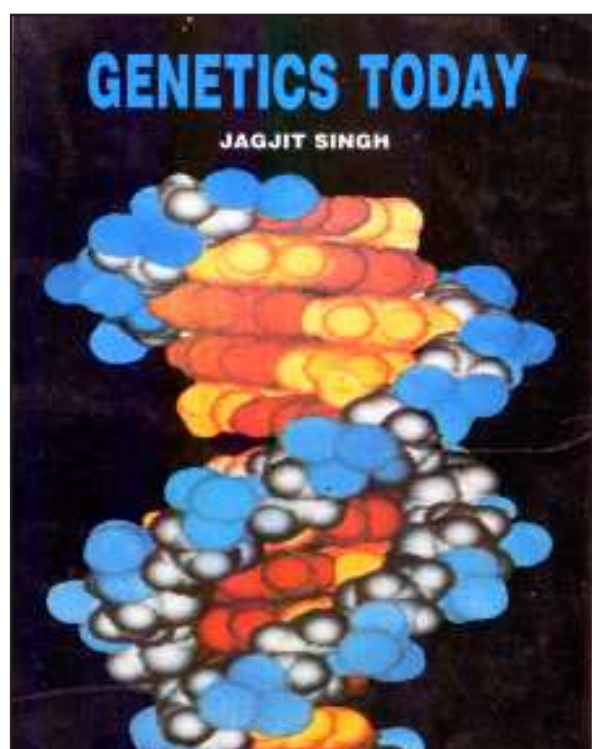
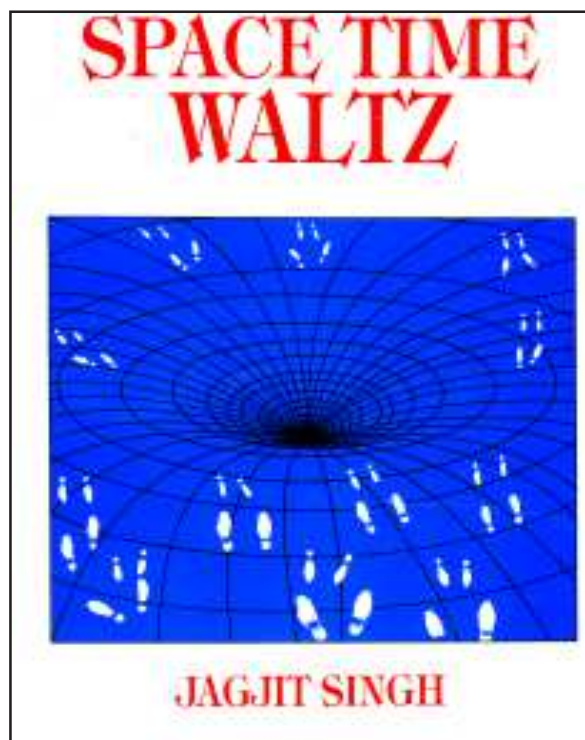
1. **A Method for ascertaining the change in passenger earnings due to a change in the basis of charge :**  
Quarterly Technical Bulletin of the Indian Railway Board vol. VI No. 65. April 1942.
2. **A Study of the Secular Trend and Seasonal Fluctuations of Passenger Traffic on the East Indian Railway :**  
Published in Sankhya, the Indian Journal of Statistics, June 1943.
3. **Incidence of Ticketless Travelling on the Lucknow-Kanpur Section of the East Indian Railway :**  
Published in Sankhya, July 1943.
4. **Theories of Probability :**  
Published in Sankhya, April 1946.
5. **Quality Control in Industry and its Application to Railway Statistics :**  
Published in Quarterly Technical Bulletin of the Indian Railway Board, April 1948.
6. **Railway Statistics :**  
Published in Sankhya, November 1950.
7. **Problem of Traffic Flow in the location of the New Ganga Bridge (I) and (II) :**  
Published in Quarterly Technical Bulletin of the Indian Railway Board, October 1963 and January 1954.
8. **A short note on Wagon Turn Round :**  
Published in Sankhya, September, 1954.
9. **A suggested Application of Wald's Sequential Analysis to Railway Operation :**  
Published in Sankhya, February 1955.
10. **Quality Control in Railway Workshops :**  
Published in the Indian Railway Engineer, July 1956.
11. **Technical Paper No. 330 :**  
Published by the Director, Research and Development of the Ministry of Railways, Rly, Board-1956.
12. **Speeds of Goods Train on the Indian Railway :**  
Indian Railway Technical Bulletin November 1960. Also carried by the Monthly Bulletin of the International Railway Congress Association, October , 1961.
13. **Ragnar Frisch on National Planning :**  
Published in the Indian Railway October 1963.

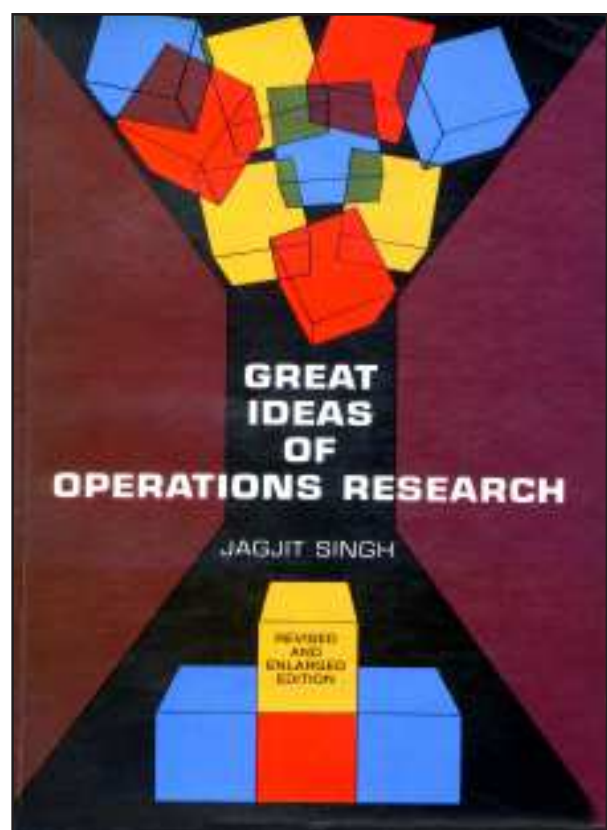
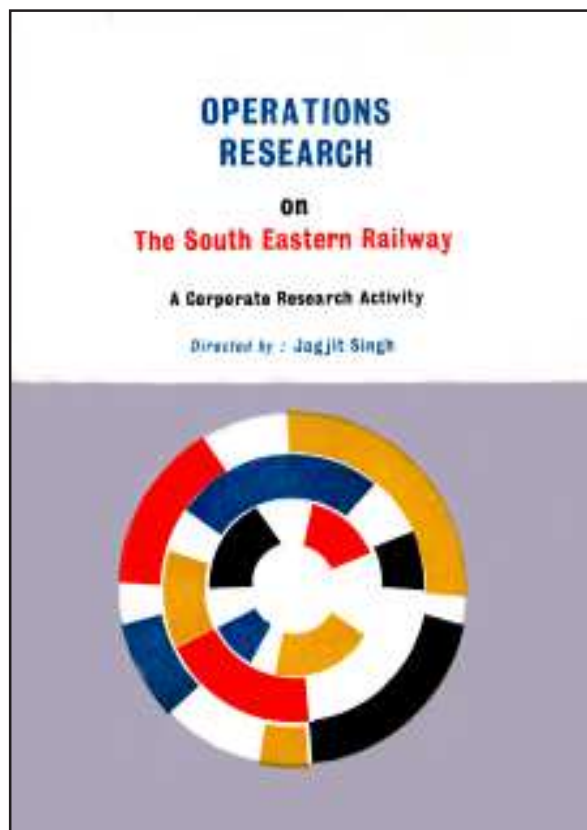
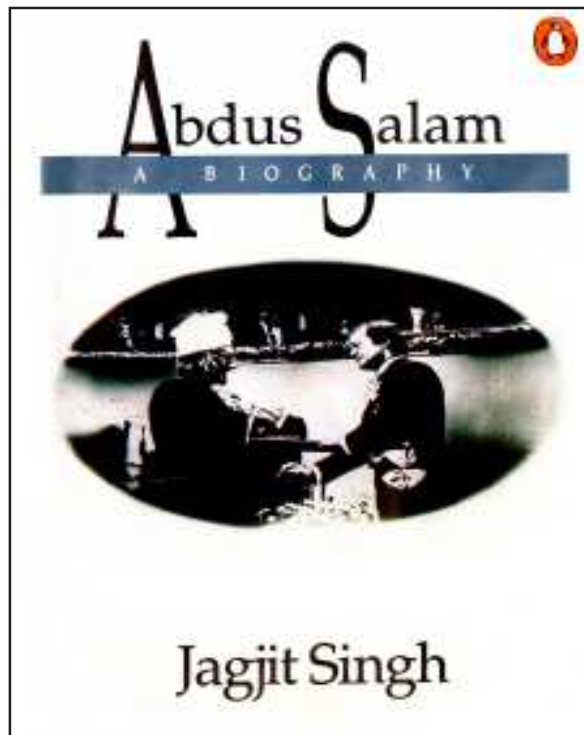
14. **Queing Theory and Traffic Congestion in Marshalling Yards :**  
Paper presented before the Seminar of Operators Research held in April 1964 under the auspices of Operations Research Society of India and R&D Wing of the Defence Ministry.
15. **An Application of the Confrontation Theories on the North East Frontier Railway :**  
Published in Sankhya; The Indian Journal of Statistics, Series B, Vol. 30, Part 3 & 4, 1968.
16. **Operations Research of South Eastern Railway :**  
Published in Sankhya; India Journal of Statistics, Series B, Vol. 32, parts 1 & 2, 1970.
17. **Operations Research :**  
Published in ISI Bulletin vol. 15, No. 6, 1963.
18. **Operational Research in India :**  
Presidential Address in the Operational Research Society of India – February 1967.
19. **Operations Research on South Eastern :**  
A Brochure published by South Eastern containing a description of the seventy odd specific problems solved on the South Eastern Railway by innovative Operations Research Techniques.
20. **Physiological Models and the Computer Published in Computer Studies in Humanities and Verbal Behaviour :**  
a quarterly journal sponsored by the Universities of Colorado, Kanas and North Carolina USA Vol.1/NRI/January 1968.





## Books Written By Jagjit Singh







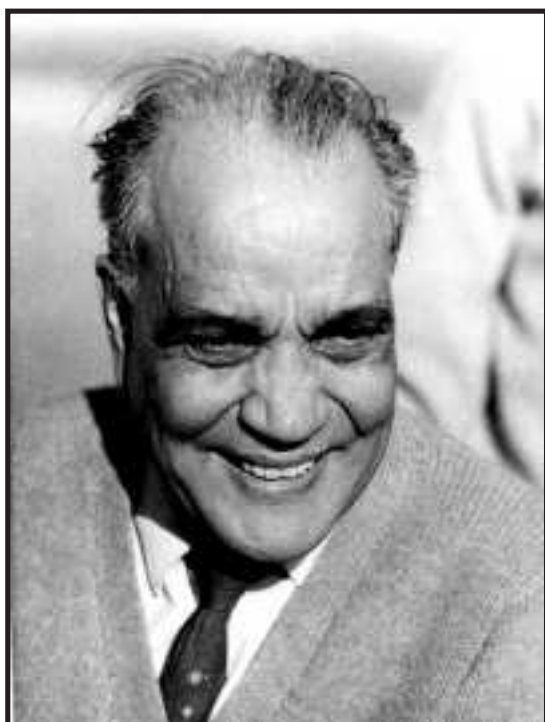
**With The Then  
Prime Minister  
Smt. Indira Gandhi**



**With The Then  
President of India  
Dr. S.Radha Krishna**

**Jagjit Singh  
Addressing a Gathering**



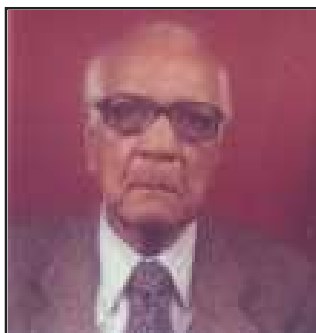


**Jagjit Singh**



**Wife - Harbans Kaur**

## Jagjit Singh : A Man of Science



### OBITUARY

by

**Khuswant Singh**

Another great Indian gone, unhonoured, unsung and unnoticed by the media. This unfortunately is the fate of people who for reasons of age or illness cease to be in the public eye. When they go few people get to know of their repertoire. This fate befell my friend Jagjit Singh, who died last September at the age of 91. Even I who has known him for over 70 years did not hear about it till a few days ago. Although I always teased him by calling him a genius, he was in fact one without any pretensions.

Jagjit was a couple of years senior to me in Government College, Lahore. Everyone knew him for one achievement: in every exam, he scored full marks in mathematics and allied subjects. He sat for the ICS, again scored full marks in mathematics papers (arithmetic, algebra, geometry) but still could not make it. His first priority was to teach mathematics but his own college turned him down. He took the next option and joined the Indian Railway Service.

He brought his uncanny mastery over mathematics and helped solve many problems Indian railways were facing. In 1960, he was appointed Director of the Railway Board. He retired in 1969 as General Manager of the North-East Frontier Railways. For the next three years, he was Managing Director,

Indian Drug and Pharmaceuticals, Adviser of Asian Development Bank and Adviser of Tata Chemicals.

It was not as a civil servant but as author of book that Jagjit Singh made his mark. When he wrote his first book *Mathematical Ideas*, he asked me to read the manuscript with a note saying: "I am using you as guinea pig. If you can understand what I have written, every one will be able to understand it." It was published in London, the first of its kind written on the subject by an Indian. It was followed by *Modern Cosmology*, *Great Ideas in Information Theory*, *Language and Cybernetics*. And many others. In 1963 Jagjit became the first Asian to win the UNESCO's Kalinga Prize for the popularisation of science (Earlier, awardees included Julian Huxley, Bertrand Russell, Konard Lorenz and Margaret Mead.) He was elected Fellow of Royal Statistical Society and awarded an honorary Doctorate in Science by Roorkee University. When Pakistan scientist Abdus Salam won the Nobel Prize for Physics in 1978, he chose Jagjit to write his biography, which was published by Penguin (Indian).

These were years when I met Jagjit Singh over coffee at least once a week. What impressed me most was his candour and humility. When he stopped coming, I did not realise he was in poor health. When he died no one bothered to tell me he was gone.