

Gauss, Euler, von Karman, Wiener, Mittra and You

Chi H. Chan
(No. 52, 1987)

City University
of Hong Kong

Carl Friedrich Gauss



1777-1855

German

Worked in a wide variety of fields in both mathematics and physics including number theory, analysis, differential geometry, geodesy, magnetism, astronomy and optics

PhD University of Helmstedt, 1799

Dissertation: *New proof of the theorem that every integral rational algebraic function of one variable can be resolved into real factors of the first or second degree*

Leonhard Euler



1707-1783

Swiss

Worked in mathematics and physics including analytic geometry, trigonometry, geometry, calculus and number theory

PhD University of Basel, 1726

Dissertation: *Physical dissertation on sound*

Theodore von Karman



1881-1963

Hungarian American

Mathematician, aerospace engineer and physicist notable for his work on supersonic and hypersonic airflow characterization

PhD Georg-August-Universität
Göttingen, 1908

Dissertation: *Studies on buckling strength*

Norbert Wiener



1894-1964

American

Did important work on stochastic and noise processes, the originator of cybernetics

PhD Harvard, 1913

Dissertation: *A Comparison Between the Treatment of the Algebra of Relatives by Schroeder and that by Whitehead and Russell*

Raj Mittra



Raj Mittra received his **BS in Physics from Agra College in 1950**. In **1953** he received an **MS in Radio Physics from the University of Calcutta** and in **1957** he received a **PhD in Electrical Engineering from the University of Toronto**. He came to the University of Illinois as a Visiting Assistant Professor in 1957, was promoted to Associate Professor in 1961 and became a Full Professor and Associate Director of the Electromagnetics Laboratory in 1966. He became the Director of the Electromagnetic Communication Laboratory in 1984. While **at UIUC Prof. Mittra supervised** the completion of **80 PhD theses and 76 MS theses**.

Extracted from ECE website on the Raj Mittra Outstanding Research Award established in 1996

Agra College, Agra

Established in 1823



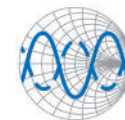
Taj Mahal



From Agra to Calcutta



Courtesy of Prof. D. Guha
Institute of Radio Physics and
Electronics, University of Calcutta



毫 State Key Laboratory of
米 Millimeter Waves
波 國家重點實驗室

(香港城市大學聯伴實驗室)
(Partner Laboratory in City University of Hong Kong)



University of Calcutta

established in 1857



C V Raman
1888-1970
NL 1930



R. N. Tagore
1861-1941
NL 1913



S N Bose
1894-1974



S K Mitra
1890-1963



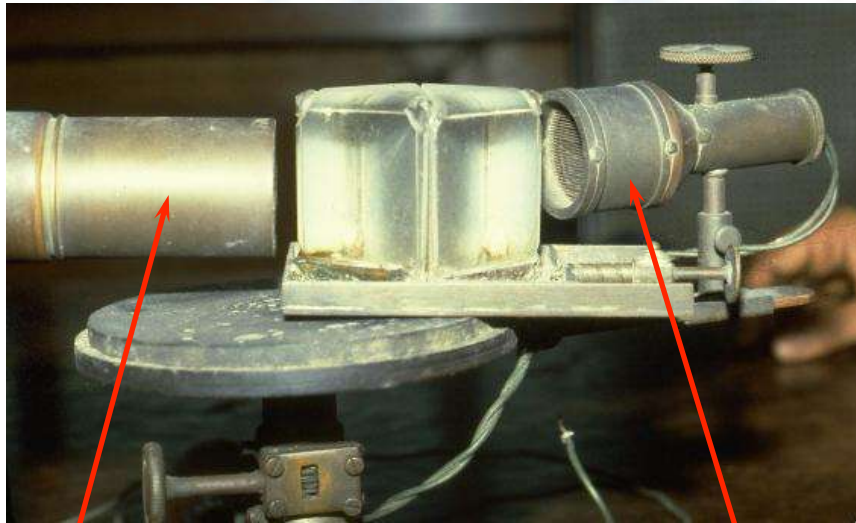
M N Saha
1893-1956





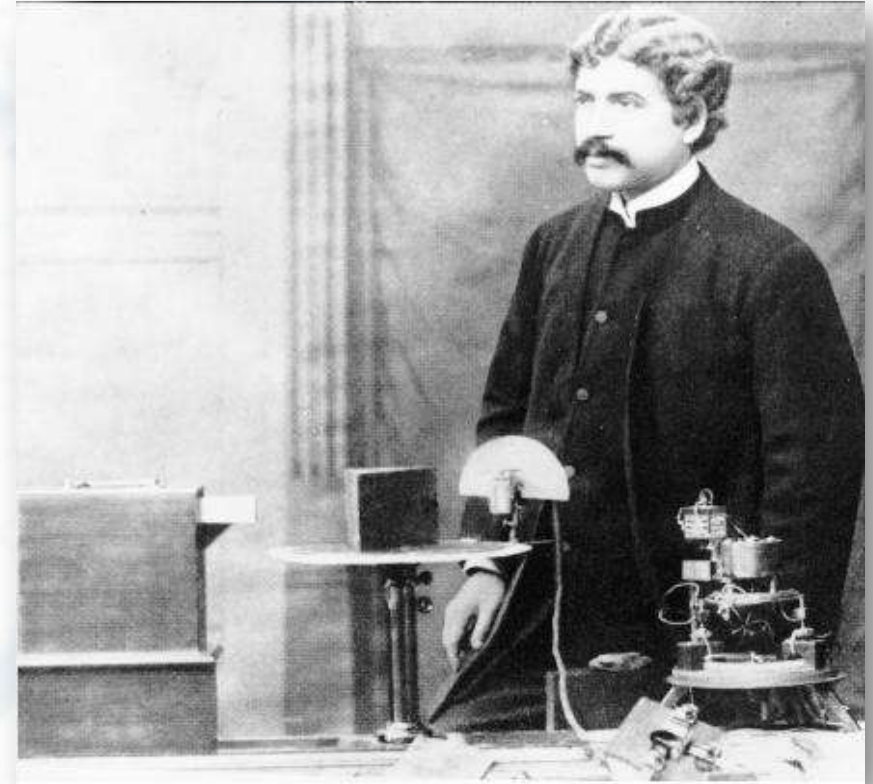
Jagdish Chandra Bose, named by IEEE as one of the fathers of radio Science

1894-1900 performed pioneering research on radio waves as short as 5 mm



transmitting horn

receiving horn



Student of Lord Rayleigh

Sisir Kumar Mitra

1890-1963

Founder of the **Institute of Radio Physics and Electronics**, University of Calcutta (1949-1955)

Did important work on ionosphere's E and F layers

DSc Calcutta University, 1919
under **C V Raman** on interference and diffraction of light

DSc University of Paris, 1923
under **Charles Fabry** on wavelength standard in the 2000-2900 Å spectral region

Worked in the Institute of Radium under **Marie Curie** and Camille Gutton at the University of Nancy on radio valve circuits and RF oscillators



University of Toronto



A dedicated academician and scientist whose enlightened approach to communication techniques has advanced man's understanding of the world, **George Sinclair** has distinguished himself as a **pioneer in engineering, an innovative educator, and noted researcher.** The Ohio State University is honored to confer upon George Sinclair the degree, Doctor of Science, honoris causa. Spring 1973

PhD, 1946 under William L. Everitt at Ohio State

Organized the Antenna lab at Ohio State

Launched the first PhD program in EE in Canada with James Wait his first PhD student

William Littell Everitt

1900-1986

PhD The Ohio State University 1933

Advisor: Frederic Columbus Blake

Dissertation: *The Calculation and Design of Alternating Current Networks Employing Triodes Operating During a Portion of a Cycle*

IEEE Medal of Honor (1954) for his distinguished career as author, educator and scientist; for his **contributions in establishing electronics and communications as a major branch of electrical engineering**;

Doctoral students: Karl Spangenberg

Nelson Wax

Edward Jordan

George Sinclair

etc.



William Littell Everitt Academic Lineage

Karl Spangenberg (Ohio State 1937)

Willis Harman (Stanford 1948)

John Thomas (Stanford 1955)

Eugene Wong (Princeton 1959)

Bruce Hajek (Berkeley 1979)

Robert Helliwell (Stanford 1948)

Laurence Manning (Stanford 1949)

Mac E. Van Valkenburg (Stanford 1952)

Jose Cruz (Illinois 1959)

Leon Chua (Illinois 1964)

Sung-Mo Kang (Berkeley 1975)

Chih-Tang Sah (Stanford 1956)



Academic Genealogy Tree of Professor Mitra

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Professor
University of Illinois at Urbana-Champaign
Field: Electrical Engineering
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Descendant (11):

• **PhD Students**

- 1996 Siva Rao Samba Chebolu
- 1996 Jonathon Casimir Vethi
- 1995 John Allan Svigelj
- 1995 David Bedford Webb
- 1992 Paul Hiroshi Aoyagi
- 1991 Ammar Ben Brahim Kouki
- 1990 Joseph David Vaccione
- 1990 James Joseph Kalloor
- 1989 Kimball Olan Merewether
- 1988 Jose E. Schutt-Aine (5)
- 1987 Steven Philip Castillo

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Professor
Pennsylvania State University
Field: Electrical Engineering
Profile Views: 20

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Professional Experience: [Edit](#)

Education & Training: [Edit](#)

Descendant (7):


• **PhD Students**

- 2010 KyungHo Yoo
- 2010 Jonathon Neil Bringuer
- 2006 Neng-Tien Huang
- 2004 Soon Jae Kwon
- 2003 Junho Yeo
- 2001 Sourav Chakravarty
- 2000 Dean Yasuo Arakaki

Mathematics Genealogy Project



William Littell Everitt

Ph.D. The Ohio State University 1933 

Dissertation: *The Calculation and Design of Alternating Current Networks Employing Triodes Operating During a Portion of a Cycle*

Advisor: [Frederic Columbus Blake](#)

Frederic Columbus Blake

Ph.D. Columbia University 1906 

Dissertation: *The Reflection and Transmission of Electric Waves by Screens of Resonators and by Grids*

Mathematics Subject Classification: 78—Optics, electromagnetic theory

Advisor: [Ernest Fox Nichols](#)



Academic Genealogy Lineage of Professor Mittra



Ernest Fox Nichols

Ph.D. Cornell University 1897 

Dissertation: Radiometric Researches in the Remote Infra-Red Spectrum

Advisor: [Edward Leamington Nichols](#)

President of the
National Academy
of Sciences

He proved that light
exerts pressure

10th President of
Dartmouth College
1909-1916,
President of MIT
from 1921-1923

Devoted himself to the
experimental study of
luminescence of solids
and liquids

Founder of Physical
Review in 1893 and
remained editor-in-chief
for twenty years.

Edward Leamington Nichols

Ph.D. Georg-August-Universität Göttingen 1879 

*Dissertation: On light emission from glowing platinum: a
contribution to the general theory of radiation*

Advisor: [Hermann Ludwig Ferdinand von Helmholtz](#)



Edw L Nichols 1906



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(Partner Laboratory in City University of Hong Kong)

Academic Lineage of Professor Mitra

Hermann Ludwig Ferdinand von Helmholtz

[Biography MathSciNet](#)

Physics
Physiology
Psychology

Ph.D. [Universität Berlin](#) 1842



Dissertation: Structure of the nervous system of invertebrates

Advisor: [Johannes Peter Müller](#)



F. Leibniz (Universität Leipzig, 1622)
J. Tomasius (Universität Leipzig, 1643)
O. Mencke (Universität Leipzig, 1665)
J.C. Wichmannshausen (Universität Leipzig, 1685)
C.A. Hausen (Martin-Luther-Universität Halle-Wittenberg, 1713)
A.G. Kastner (Universität Leipzig, 1739)
J.C.P. Erxleben (Georg-August-Universität Göttingen, 1767)
C.E. von Weigel (Georg-August-Universität Göttingen, 1771)
K.A. Rudolphi (Ernst-Moritz-Arndt-Universität Greifswald, 1795)
J.P. Muller (Rheinische Friedrich-Wilhelms-Universität Bonn, 1822)
H.von Helmholtz (Universität Berlin, 1842)
E.L. Nichols (Georg-August-Universität Göttingen, 1879)
E.F. Nichols (Cornell University, 1897)
F.C. Blake (Columbia University, 1906)
W.L. Everitt (Ohio State University, 1933)
G. Sinclair (Ohio State University, 1946)
R. Mitra (University of Toronto, 1955)

Academic Lineage of Professor Mittra



Jakob Thomasius

Magister der Philosophie Universität Leipzig 1643



Dissertation:

Advisor 1: [Friedrich Leibniz](#)

Philosopher and jurist

Teacher of Gottfried Leibniz

Was a lawyer,
registrar and
professor of moral
philosophy

Father of Gottfried
Leibniz

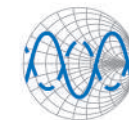
Friedrich Leibniz

Magister der Philosophie Universität Leipzig 1622



Dissertation:

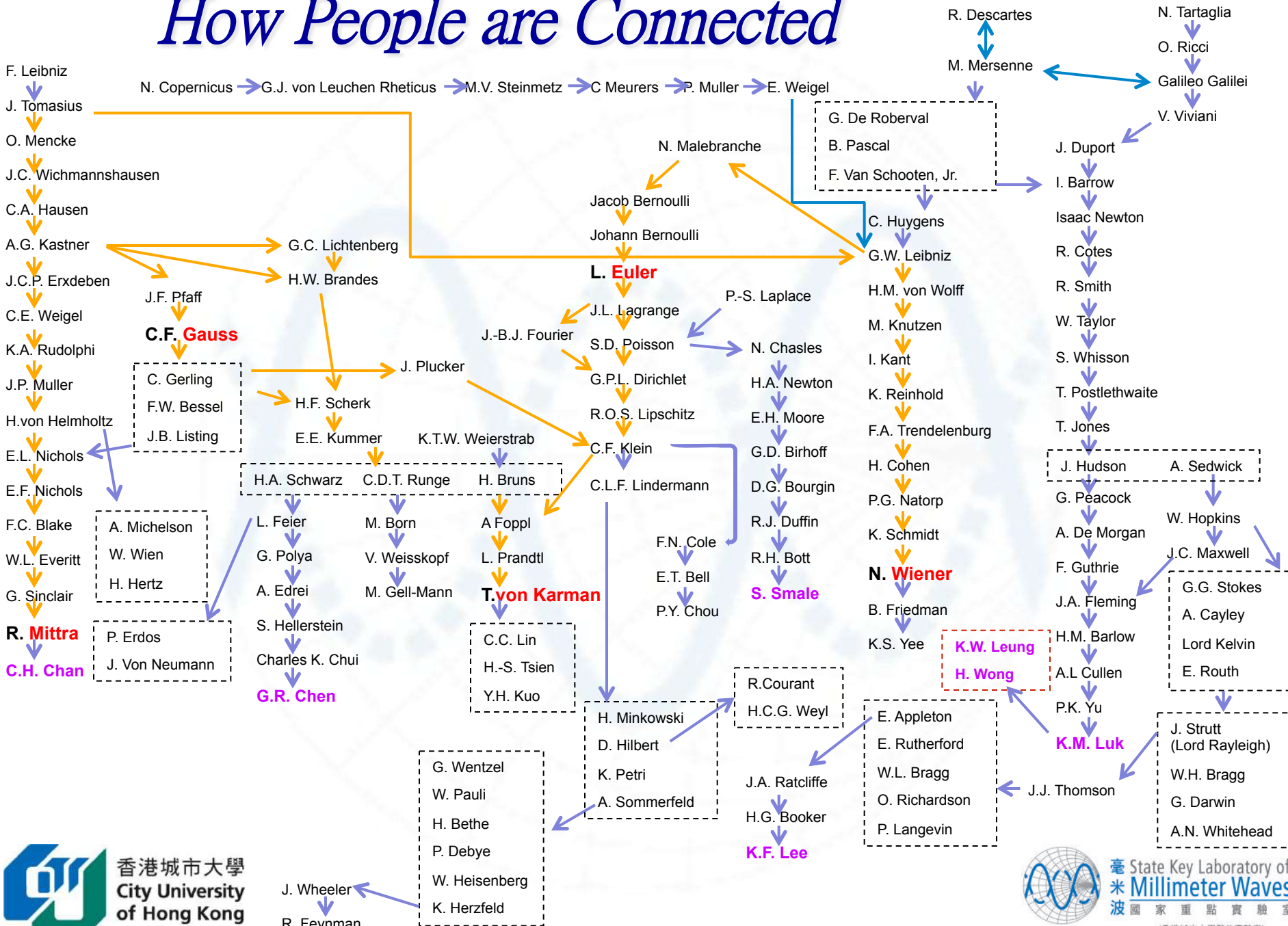
Advisor: Unknown



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(香港城市大學聯伴實驗室)
(Partner Laboratory in City University of Hong Kong)

How People are Connected



You May Recognize Some of These Folks



Thank you

Professor Mitra

for giving me the chance to be
your number 52

