GENEALOGY DATABASE ENTRY

Klein, Christian Felix   1849 - 1925

DEGREE: PhD   DATE: 1868   PLACE: Bonn
TEACHER/RESEARCH ADVISOR: Plücker

mathematician; contributed to almost all branches of mathematics, including applied mathematics and mathematical physics; furnished the projective foundation of the non-Euclidean geometries, i.e., Klein models with Cayley-Klein metric; created the "Erlanger Programm" - the essence being that every geometry known so far is based on a certain group, and the task of the geometry in question consists in setting up the invariants of this group; showed how theoretical physics, and especially the theory of relativity, could be understood on the basis of ideas presented in the "Erlanger Programm"; presented the Riemann surface as an indispensable component of function theory; derived the complete theory of fifth-degree equations via consideration of the icosahedron; presented the complete theory of elliptic modular functions (with R. Fricke); discovered congruence groups; developed automorphic functions; wrote (with Sommerfeld) a textbook on the theory of the gyroscope which is still the standard work in this field.

1. *Dictionary of Scientific Biography*; Charles Scribner's Sons: 1970-1990; vol. 7, p396-400.
2. *Neue Deutsche Biographie*; Duncker & Humblot: 1953-1990; vol. 11, p736-737.
3. *Almanach Akad. Wiss. Wien* **1926**, *76*, 193-198.
4. Prasad, G. *Some Great Mathematicians of the 19th Century II*; Benares Mathematical Society: 1934; p245-277.
5. *Naturwiss.* **1919**, *7*, 273-317.
6. *Jahresber. Deut. Math. Ver.* **1925**, *34*, 197-213.
7. *Sitzungsber. Berliner Math. Gesellsch.* **1926**, *25*, 54-87.
8. *Mitt. Univ. Bund Gottingen* **1923**, *5*, 11-36.
9. *J. London Math. Soc.* **1926**, *1*, 25-32.
10. *Proc. Roy. Soc. London A* **1928**, *121*, i-xix.