5.Superconducting Qubits



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Freeman Dyson
 Gregory Chaitin
 James Crutchfield
 Norman Packard
 Panos Ligomenides
 Jerome Rothstein
 Carl Hewitt
 Norman Hardy
 Edward Fredkin
 Tom Toffoli
 Rolf Landauer
 John Wheeler

13 Frederick Kantor
14 David Leinweber
15 Konrad Zuse
16 Bernard Zeigler
17 Carl Adam Petri
18 Anatol Holt
19 Roland Vollmar
20 Hans Bremerman
21 Donald Greenspan
22 Markus Buettiker
23 Otto Floberth
24 Robert Lewis

25 Robert Suaya 26 Stan Kugell 27 Bill Gosper 28 Lutz Priese 39 Madhu Gupta 30 Paul Benioff 31 Hans Moravec 32 Ian Richards 33 Marian Pour-El 34 Danny Hillis 35 Arthur Burks 36 John Cocke

37 George Michaels
38 Richard Feynman
39 Laurie Lingham
40 Thiagarajan
41 ?
42 Gerard Vichniac
43 Leonid Levin
44 Lev Levitin
45 Peter Gacs
46 Dan Greenberger





Phase qubit with flux bias











transformation into new states







3-Josephson junction persistent current flux qubit



3-Josephson junction persistent current flux qubit

3-Josephson junction persistent current flux qubit

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3-Josephson junction persistent current flux qubit: Microwave pules sequences

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Qubit dynamics – Relaxation (T_1)

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Qubit dynamics – Ramsey fringes (T_2^*)

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Ramsey fringes at two different bias fluxes near degeneracy point-

Cooper pair box scheme

Indication of quantum coherence for a Cooper pair box

