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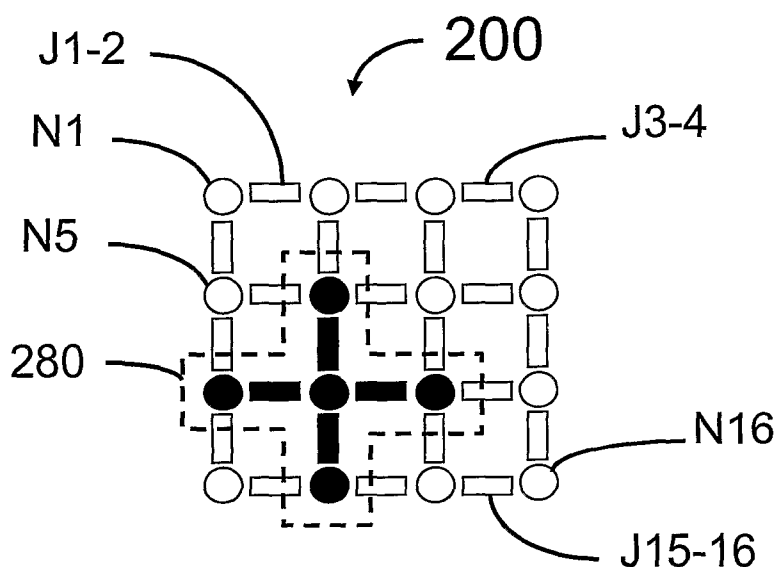
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(54) Title: ANALOG PROCESSOR COMPRISING QUANTUM DEVICES



(57) Abstract: Analog processors for solving various computational problems are provided. Such analog processors comprise a plurality of quantum devices, arranged in a lattice, together with a plurality of coupling devices. The analog processors further comprise bias control systems each configured to apply a local effective bias on a corresponding quantum device. A set of coupling devices in the plurality of coupling devices is configured to couple nearest-neighbor quantum devices in the lattice. Another set of coupling devices is configured to couple next-nearest neighbor quantum devices. The analog processors further comprise a plurality of coupling control systems each configured to tune the coupling value of a corresponding coupling device in the plurality of coupling devices to a coupling. Such quantum processors further comprise a set of readout devices each configured to

measure the information from a corresponding quantum device in the plurality of quantum devices.



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