CPC COOPERATIVE PATENT CLASSIFICATION

G PHYSICS
(NOTES omitted)

INSTRUMENTS

G06 COMPUTING; CALCULATING; COUNTING
(NOTES omitted)

G06N COMPUTING ARRANGEMENTS BASED ON SPECIFIC COMPUTATIONAL MODELS

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

3/00 Computing arrangements based on biological models

3/002 . {Biomolecular computers, i.e. using biomolecules, proteins, cells (using DNA G06N 3/123; using neurons G06N 3/061)}
3/004 . {Artificial life, i.e. computers simulating life}
3/006 . . {based on simulated virtual individual or collective life forms, e.g. single "avatar", social simulations, virtual worlds or particle swarm optimisation}
3/008 . . {based on physical entities controlled by simulated intelligence so as to replicate intelligent life forms, e.g. robots replicating pets or humans in their appearance or behavior}
3/02 . using neural network models
3/04 . . Architectures, e.g. interconnection topology
3/0409 . . . {Adaptive resonance theory [ART] networks}
3/0418 . . . {using chaos or fractal principles}
3/0427 . . . {in combination with an expert system}
3/0436 . . . {in combination with fuzzy logic}
3/0445 . . . {Feedback networks, e.g. hopfield nets, associative networks}
3/0454 . . . {using a combination of multiple neural nets}
3/0463 . . . {Neocognitrons}
3/0472 . . . {using probabilistic elements, e.g. p-rams, stochastic processors}
3/0481 . . . {Non-linear activation functions, e.g. sigmoids, thresholds}
3/049 . . . {Temporal neural nets, e.g. delay elements, oscillating neurons, pulsed inputs}
3/06 . . Physical realisation, i.e. hardware implementation of neural networks, neurons or parts of neurons
3/061 . . . {using biological neurons, e.g. biological neurons connected to an integrated circuit}
3/063 . . . using electronic means
3/0635 . . . . {using analogue means}
3/067 . . . using optical means
3/0675 . . . . {using electro-optical, acousto-optical or opto-electronic means}
3/08 . . Learning methods
3/082 . . . {modifying the architecture, e.g. adding or deleting nodes or connections, pruning}
3/084 . . . {Back-propagation}
3/086 . . . {using evolutionary programming, e.g. genetic algorithms}
3/088 . . . {Non-supervised learning, e.g. competitive learning}
3/10 . . Simulation on general purpose computers
3/105 . . . {Shells for specifying net layout}
3/12 . using genetic models
3/123 . . {DNA computers, i.e. information processing using biological DNA}
3/126 . . {Genetic algorithms, i.e. information processing using digital simulations of the genetic system}

5/00 Computing arrangements using knowledge-based models

5/003 . {Dynamic search techniques; Heuristics; Dynamic trees; Branch-and-bound}
5/006 . . {Automatic theorem proving}
5/02 . Knowledge representation
5/022 . . {Knowledge engineering; Knowledge acquisition}
5/025 . . {Extracting rules from data}
5/027 . . {Frames}
5/04 . Inference methods or devices
5/041 . . {Abduction}
5/042 . . {Backward inferencing}
5/043 . . {Distributed expert systems; Blackboards}
5/045 . . {Explanation of inference steps}
5/046 . . {Forward inferencing; Production systems}
5/047 . . . {Pattern matching networks; RETE networks}
5/048 . . {Fuzzy inferencing}

7/00 Computing arrangements based on specific mathematical models

7/005 . {Probabilistic networks}
7/02 . using fuzzy logic (computing arrangements based on biological models G06N 3/00; computing arrangements using knowledge-based models G06N 5/00)
7/023 . . {Learning or tuning the parameters of a fuzzy system}
7/026 . . {Development tools for entering the parameters of a fuzzy system}
7/04 . . Physical realisation

7/043 . . . {Analogue or partially analogue implementation}

7/046 . . . {Implementation by means of a neural network (neural networks using fuzzy logic G06N 3/0436)}

7/06 . . Simulation on general purpose computers

7/08 . using chaos models or non-linear system models

10/00 Quantum computing, i.e. information processing based on quantum-mechanical phenomena

WARNING

Group G06N 10/00 is impacted by reclassification into groups G06N 10/20, G06N 10/40, G06N 10/60, G06N 10/70 and G06N 10/80.

All groups listed in this Warning should be considered in order to perform a complete search.

10/20 . Models of quantum computing, e.g. quantum circuits or universal quantum computers

WARNING

Group G06N 10/20 is incomplete pending reclassification of documents from group G06N 10/00.

Groups G06N 10/00 and G06N 10/20 should be considered in order to perform a complete search.

10/40 . Physical realisations or architectures of quantum processors or components for manipulating qubits, e.g. qubit coupling or qubit control

WARNING

Group G06N 10/40 is incomplete pending reclassification of documents from group G06N 10/00.

Groups G06N 10/00 and G06N 10/40 should be considered in order to perform a complete search.

10/60 . Quantum algorithms, e.g. based on quantum optimisation, quantum Fourier or Hadamard transforms

WARNING

Group G06N 10/60 is incomplete pending reclassification of documents from group G06N 10/00.

Groups G06N 10/00 and G06N 10/60 should be considered in order to perform a complete search.

10/70 . Quantum error correction, detection or prevention, e.g. surface codes or magic state distillation

WARNING

Group G06N 10/70 is incomplete pending reclassification of documents from group G06N 10/00.

Groups G06N 10/00 and G06N 10/70 should be considered in order to perform a complete search.

10/80 . Quantum programming, e.g. interfaces, languages or software-development kits for creating or handling programs capable of running on quantum computers; Platforms for simulating or accessing quantum computers, e.g. cloud-based quantum computing

WARNING

Group G06N 10/80 is incomplete pending reclassification of documents from group G06N 10/00.

Groups G06N 10/00 and G06N 10/80 should be considered in order to perform a complete search.

20/00 Machine learning

20/10 . using kernel methods, e.g. support vector machines [SVM]

20/20 . Ensemble learning

99/00 Subject matter not provided for in other groups of this subclass

99/007 . {Molecular computers, i.e. using inorganic molecules (using biomolecules G06N 3/002)}