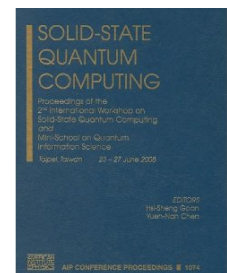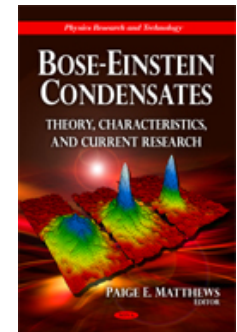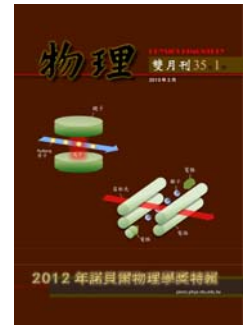# Publications since 2001:

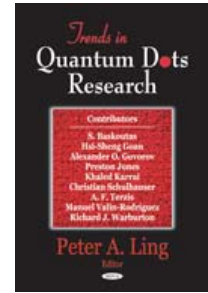**A. Book Chapters, Proceedings and etc.**
   (*: Correspondence author(s))

1. <u>Hsi-Sheng Goan*</u>, Guest Editor for Physics Bimonthly, Vol. 35, no. 1 (February **2013**), Special issue on 2012 Nobel Prize in Physics [編輯者，物理雙月刊 **35 卷 1 期**（**2013 年 2 月**）・2012 年諾貝爾物理學獎特輯]

2. Md. M. Ali and <u>Hsi-Sheng Goan*</u>, **"*Quantum Interference in the Time-of-Flight Distribution for Atomic Bose-Einstein Condensates*"**, **invited book chapter** in "Bose-Einstein Condensates: Theory, Characteristics, and Current Research", Ed. by P. E. Matthews (Nova Science, New York, **2010**) pp. 35-61. **[ISBN: 978-1-61728-114-3]**

3. SOLID-STATE QUANTUM COMPUTING: **American Institute of Physics (AIP) Conference Proceedings Volume 1074** (AIP, Melville, New York**, 2008**); Ed. by <u>Hsi-Sheng Goan*</u> and Y. N. Chen. **[ISBN: 978-0-7354-0605-6]**

4. <u>Hsi-Sheng Goan*</u>, Guest Editor for Physics Bimonthly, Vol. 30, no. 5 (October, **2008**), Special issue on Quantum Information and Quantum Computation.
   [編輯者，物理雙月刊 30 卷 5 期（**2008** 年 10 月）量子資訊與量子計算特輯]

5. <u>His-Sheng Goan*</u>, "*Monte Carlo method for a superconducting cooper-pair-box charge qubit measured by a single-electron transistor*", in "*Quantum Computation in Solid State Systems*", Ed. by B. Ruggiero, P. Delsing, C. Granata, Y. Pashkin and P. Silvestrini (Springer, New York, **2006**) pp.171-179. **[ISBN: 0-387-26332-2]**

6. <u>Hsi-Sheng Goan*</u>, "*Quantum measurement process of a coupled quantum dot system*", **invited book chapter** in "*Trends in Quantum Dots Research*", Ed. By P.A. Ling (Nova Science, New York, **2005**) pp.35-73. **[ISBN: 1-59454-407-7]**

B. Refereed Journal Papers
Paper published or submitted (*: Correspondence author(s))

7. Y. Chou, S.-Y. Huang and <u>H.-S. Goan*</u>, "*Optimal control of fast and high-fidelity quantum gates with electron and nuclear spins of a nitrogen-vacancy center in diamond*", (submitted to Phys. Rev. A).

8. Md. M. Ali*, P.-W. Chen, A. Maassen van den Brink*, H.-S. Goan*, "Quantum Zeno dynamics of qubits in a squeezed reservoir: effect of measurement selectivity", arXiv:1302.2477 (submitted to Phys. Rev. A).

9. D. Hu, S.-Y. Huang, J.-Q. Liao, L. Tian*, <u>H.-S. Goan*</u>, "*Quantum Coherence in Ultrastrong Optomechanics*", Phys. Rev. A **91**, 013812 (2015)

10. S.-Y. Huang and <u>H.-S. Goan*</u>, "*Optimal control for fast and high-fidelity quantum gates in coupled superconducting flux qubits*", Phys. Rev. A **90**, 012318 (2014).

11. J.-S. Tai, K.-T. Lin, and <u>H.-S. Goan*</u>, "*Optimal control of quantum gates in an exactly solvable non-Markovian open quantum bit system*", Phys. Rev. A **89**, 062310 (2014).

12. S.-Y. Huang, <u>H.-S. Goan*</u>, X.-Q. Li, and G. J. Milburn, "*Generation and stabilization of a three-qubit entangled W state in circuit QED via quantum feedback control*", Phys. Rev. A **88**, 062311 (2013).

13. O. Jonasson, C.-S. Tang*, <u>H.-S. Goan*</u>, A. Manolescu, V. Gudmundsson*, "*Symmetric excitation and de-excitation of a cavity QED system*", Eur. Phys. J. B **86**, 291 (2013).

14. V. Gudmundsson*, O. Jonasson, T. Arnold, C.-S. Tang*, <u>H.-S. Goan*</u>, A. Manolescu*, "*Stepwise introduction of model complexity in a generalized master equation approach to time-dependent transport*", Fortschr. Phys. **61**, 305 (2013).

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16. B. Hwang and <u>H.-S. Goan*</u>, "*Optimal control for non-Markovian open quantum systems*", Physical Review A **85**, 032321 (2012).

17. V. Gudmundsson*, O. Jonasson, C.-S. Tang*, <u>H.-S. Goan*</u>, A. Manolescu, "*Time-dependent transport of electrons through a photon cavity*", Physical Review B **85**, 075306 (2012).

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19. H.-S. Goan*, P.-W. Chen and C.-C. Jian, "*Evolution equations of non-Markovian finite-temperature two-time correlation functions: beyond the quantum regression theorem*", Journal of Chemical Physics **134**, 124112 (2011).

20. P.-W. Chen, C.-C. Jian and H.-S. Goan*, "*Non-Markovian dynamics of a nanomechanical resonator measured by a quantum point contact*", Physical Review B **83**, 115439 (2011).

21. X. Z. Yuan, H.-S. Goan* and K. D. Zhu, "*Dynamics of a driven spin coupled to an antiferromagnetic environment*", New Journal of Physics **13,** 023018 (2011).

22. S. Raghunathan*, T. A. Brun*, H.-S. Goan*, "*Gaussian approximation and single-spin measurement in magnetic resonance force microscopy with spin noise*", Physical Review A **82**, 052319 (2010),.

23. Md. M. Ali, P.-W. Chen and H.-S. Goan*, "*Decoherence-free subspace and disentanglement dynamics for two qubits in a common non-Markovian squeezed reservoir*", Physical Review A **82**, 022103 (2010) ,

24. H.-S. Goan*, C.-C. Jian and P.-W. Chen, "*Non-Markovian finite-temperature two-time correlation functions of system operators of a pure-dephasing model*", Physical Review A **82**, 012111 (2010) ,

25. X. Z. Yuan, H.-S. Goan* and K. D. Zhu, "*Geometric phase of a central spin coupled to an antiferromagnetic environment*", Physical Review A **81**, 034102 (2010),

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30. X. Z. Yuan, H.-S. Goan*, C. H. Lin, K. D. Zhu and Y. W. Jiang, "*Nanomechanical-resonator-assistedinduced transparency in a Cooper-pair-box system*", New Journal of Physics **10**, 095016 (2008),.

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33. K.-L. Liu and <u>H.-S. Goan</u>*, "*Non-Markovian entanglement dynamics of quantum continuous variable systems in thermal environments*", Phys. Rev. A **76**, 022312 (2007),

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38. J. Twamley*, D.W. Utami, <u>H.-S. Goan</u>, and G. J. Milburn, "*Spin detection in a quantum electromechanical system*", New Journal of Physics **8**, 63 (2006).

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40. M. Sarovar*, <u>H.-S. Goan</u>*, T. P. Spiller, and G. J. Milburn, "*High fidelity measurement and quantum feedback control in circuit QED"*, Physical Review A **72,** 062327 (2005).

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45. T. M. Stace*, S.D. Barrett, <u>H.-S. Goan</u> and G. J. Milburn, "*Parity measurement of one- and two-electron double well systems*", Physical Review B **70**, 205342 (2004).

46. <u>H.-S. Goan</u>*, "*Monte Carlo method for a quantum measurement process by a single-electron transistor*", Physical Review B **70**, 075305 (2004).

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electromechanical system", Physical Review B **70**, 075303 (2004).

49. C.D. Hill* and H.-S. Goan*, "*Gates for the Kane quantum computer in the presence of dephasing*", Physical Review A **70**, 022310 (2004).

50. C.D. Hill* and H.-S. Goan*, "*Comment on `Grover search with pairs of trapped ions'* ", Physical Review A **69**, 056301 (2004).

51. C.J. Wellard*, L.C.L. Hollenberg, L.M. Kettle and H.-S. Goan, "*Voltage control of exchange coupling in phosphorus doped silicon*", Journal of Physics: Condensed Matter **16**, 5697-5704 (2004).

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56. T.A. Brun* and H.-S. Goan*, "*Realistic simulations of single-spin nondemolition measurement by magnetic resonance force microscop*", Phys. Rev. A **68**, 032301 (2003),

57. G.P. Berman*, F. Borgonovi, H.-S. Goan, S.A. Gurvitz, and V.I. Tsifrinovich, "*Single-spin measurement and decoherence in magnetic resonance force microscopy*", Physical Review B **67**, 094425 (2003).

58. C.J. Wellard*, L.C.L. Hollenberg, F. Parisoli, L.M. Kettle, H.-S. Goan, J.A.L. McIntosh and D.N. Jamieson, "*Electron exchange coupling for single donor solid-state spin qubits*", Physical Review B **68**, 195209 (2003).

59. R.G. Clark*, R. Brenner, T.M. Buehler, V. Chan, N.J. Curson, A.S. Dzurak, E. Gauja, H.-S. Goan, A.D. Greentree et al., "*Progress in silicon-based quantum computing*", Philosophical Transactions of the Royal Society of London A **361**, 1451 (2003).

60. H.-S. Goan* and G. J. Milburn, "*Dynamics of a mesoscopic charge quantum bit under continuous quantum measurement*", Physical Review B **64**, 235307 (2001).

61. H.-S. Goan*, G. J. Milburn, H. M. Wiseman, and H. B. Sun, "*Continuous quantum measurement of two coupled quantum dots using a point contact: A quantum trajectory approach*", Physical Review B **63**, 125326 (2001).

C. Conference Full Papers

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62. D.-B. Tsai and H.-S. Goan*, *Gradient ascent pulse engineering approach to CNOT*

gates in donor electron spin quantum computing, AIP Conference Proceedings Vol. 1074, pp.50-53 (2008). [ISBN: 978-0-7354-0605-6]

63. C.-H. Lin and <u>H.-S. Goan</u>*, *Conditional statistics of electron transport in interacting mesoscopic devices*, AIP Conference Proceedings Vol. 1074, pp.103-106 (2008).

64. X. Z. Yuan, <u>H.-S. Goan</u>* and K. D. Zhu, **2007**, "*Entanglement evolution of two coupled spin qubits in a quantum spin environment*", Proc. 8th Int. Conf. on Quantum Communication, Measurement and Computing, pp.291-294 (NICT Press, Tokyo, 2007).

65. K.-L. Liu and <u>H.-S. Goan</u>*, "*Non-Markovian dynamics of the entanglement of electromechanical oscillators in thermal environments*", Proc. 8th Int. Conf. on Quantum Communication, Measurement and Computing pp.287-290 (NICT Press, Tokyo, 2007).

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