



専門分野	物性理論
主要担当授業科目	本科:物理, 応用物理 専攻科:解析力学, 材料物理, 統計力学
資格・受賞等	・国連英検B級 ・2009年 The International Plato Award for the Educational Achievement ・2009年 The Order of International Fellowship Golden Peace Prize ・2009年 Ultimate Achiever Award for Science-Certificate 工業英検2級, TEP Test 2級
社会・学会活動	日本物理学会会員, アメリカ物理学会終身会員, アメリカ物理教育学会会員, IEEE会員, IEEEコンピュータ学会会員, IEEE磁性学会会員, IEEE通信学会会員, 日本希土類 学会会員, IET会員, イギリス物理学会会員
研究シーズ 研究テーマ	遷移金属, 重い電子系, 高温超伝導体, 有機導体の磁性と超伝導の研究, 磁性超伝導体の体 積効果と圧力効果、セリウム化合物の熱膨張、ウラン 化合物の熱膨張
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主な著書・論文・特許等

- (1) Rikio Konno, 'Self-Consistent Renormalization Theory of Anisotropic Spin Fluctuations in Quasi-One Dimensional Nearly Antiferromagnetic Metals', *Nano Technology&Nano Science Journal* 5, 233(2023).
- (2) Rikio Konno, Nobukuni Hatayama, Yoshinori Takahashi, 'Theory of the magnetic susceptibility including zero-point spin fluctuations of itinerant nearly ferromagnetic compounds', to be published in *Physica B*.
- (3) Rikio Konno, Nobukuni Hatayama, Yoshinori Takahashi, 'Theory of Thermal Expansion Based on the Localized Paramagnon Model', to be published in *Progress in Nuclear Science and Technology* 5, (2018).
- (4) Rikio Konno, Nobukuni Hatayama, Ranjan Chaudhury, 'The pressure coefficient of the superconducting order parameter at the ground state in ferromagnetic superconductors', *J. Low Temperature Physics* 175 (2014), 508.
- (5) Rikio Konno and Nobukuni Hatayama, 'Pressure Effects on the Superconducting Transition Temperature of Ferromagnetic Superconductors', the Proceedings of OPAP 2013, 16.
- (6) Rikio Konno and Nobukuni Hatayama, 'Volume effects and pressure effects on ferromagnetic superconductors', *J. Phys. Conf. Ser.* 344 (2012), 012016.
- (7) Rikio Konno and Nobukuni Hatayama, 'The reexamination of thermal expansion of ferromagnetic superconductors and the pressure differential of its superconducting transition temperature—possible application to UGe₂', *J. Phys. Conf. Ser.* 286(2011), 012010.
- (8) Rikio Konno, 'The self-consistent renormalization theory of spin fluctuations for itinerant antiferromagnetism in quasi-one dimensional metals', the Proc. 23th Int. Conf. on Low Temperature Physics, Hiroshima, 2002, *Physica* B329–333(2003), 1288.
- (9) Rikio Konno, 'THE DYNAMICAL SUSCEPTIBILITY BASED ON THE HUBBARD MODEL OF THE BODY CENTERED TETRAGONAL LATTICE', *Physica* B312–313(2002), 511. (The Proceedings of the International Conference on Strongly Correlated Electron Systems 2001).
- (10) Rikio Konno, 'The self-consistent renormalization theory of antiferromagnetic spin fluctuations based on the Anderson lattice model', *Physica* B284–288(2000), 1207. (The Proceedings of the 22nd International Conference on Low Temperature Physics).
- (11) Rikio Konno, 'The dynamical susceptibility based on the Hubbard model of the hexagonal close-packed lattice', *J. Physics and Chemistry of Solids* 60(1999), 1169. (The Proceedings of the ISSP7).
- (12) Rikio Konno, 'The self-consistent renormalization theory of longitudinal spin fluctuations for weak antiferromagnetic metals with degenerate bands', *CZECHOSLOVAK J.Phys.* 46S(1996), 1841. (The Proceedings of the 21st International Conference on Low Temperature Physics, 1996).
- (13) Rikio Konno, 'THE SELF-CONSISTENT RENORMALIZATION THEORY OF SPIN FLUCTUATIONS FOR THE ONE-DIMENSIONAL METALS', *Synthetic Metals* 70(1995), 1013. (The Proceedings of the International Conference on Science and Technology of