

Chapter 8

Conclusions



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As can be seen in this collection, several applications and studies related to PLS have currently been performed, and this trend undoubtedly will occur as wireless communication networks evolve into their next generation. PLS fundamentals for relay networks have been shown to be important. It has been shown that PLS research can be found under several different context from fundamental to quantum key distribution, and wireless body area networks. PLS research has also been shown that it has the potential to be commercialised with the fast developments of IoT. It has appeared that PLS research does not necessarily imply heavy mathematics, but novel applications might be a key factor to determine the attractiveness and success of PLS.

It is thus envisaged that PLS research for the future mainly relies on applications of novel devices. Nevertheless, fundamental results are still regularly required to form the backbone for new applications and new scenarios. PLS under correlated fading environments will continue to play one of the key roles over future wireless networks, which is mainly because of their high density. IoT will continue to be critically important in several new fronts as smart devices become smarter with their larger numbers. The presence of practical relay networks also gives rise to PLS research as outdated CSI, and imperfect CSI severity combine, and evolves into unknown CSI severity. The future of wireless communication research is thus lively, and PLS research will continue to adapt to suit new applications.

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