

東北大学大学院情報科学研究科
純粋・応用数学研究センター

情報数理談話会のお知らせ

日 時： 2021年12月16日(木) 13:30より14:30まで

場 所： 東北大学大学院情報科学研究科棟 2階大講義室

※要事前参加登録 (ホームページをご覧ください)

講演者： 馬 秀爽 氏 (東北大学大学院情報科学研究科)

題 目： Spirallikeness, strong starlikeness and quasiconformal extension of harmonic univalent functions

備 考： この情報数理談話会は課程博士予備審査会を兼ねています

[概要] We extend the spirallike functions and strongly starlike functions to harmonic univalent functions. To investigate the analytic characterizations of spirallikeness and strong starlikeness, we define the harmonic spirallike functions and strongly starlike functions with a hereditary property. Al-Amiri and Mocanu gave the characterization of the C^1 spirallike functions in 1981. Following his result, we find a sufficient condition for a harmonic function to be spirallike. We also give a convolution theorem, which shows a equivalent condition of the spirallikeness. Since we have a relation between the spirallikeness and strong starlikeness, all results can be applied to strongly starlike functions. Finally, we consider the quasiconformal extensions of some harmonic univalent functions defined in the interior and exterior unit disk.

ホームページ： <https://www.math.is.tohoku.ac.jp/research/colloquium.html>