

早稲田大学整数論セミナーの予定 (2019年度 第15回)

日時：2019年7月26日（金）16:30～18:00

場所：〒169-8555 東京都新宿区大久保3-4-1
早稲田大学西早稲田キャンパス（旧・大久保キャンパス）
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講演者：小松尚夫 (浙江理工大学)

タイトル：Continued fractions: their expressions, identities, and applications

アブストラクト：Hurwitz continued fractions and Tasoiev continued fractions are two typical regular (or simple, normal) continued fractions whose sequences of partial quotients form arithmetic series and geometric series, respectively. First, we mention their expressions, properties and yielding identities. Next, we find (non-regular and regular) continued fractions for infinite reciprocal sums of Fibonacci, Lucas and Tribonacci numbers. We also give continued fraction expansions of some more series, including the generating functions of Bernoulli, Euler, Cauchy, harmonic numbers. On the contrary, some new identities can be obtained from continued fractions by using approximation theory. Finally, we show some applications of (non-regular and regular) continued fractions. In particular, the topological index of some graphs (related to Chemistry) can be calculated systematically.