## 报告人： 宋林亮 博士

## 单位： 同济大学

## 时间：10月19日（周四）下午15:30--16:30

## 邀请人： 罗栗

## 地点：闵行数学楼126室

## 题目： Affine walled Brauer-Clifford superalgebras

## 摘要：In this talk, a notion of affine walled Brauer-Clifford superalgebras $BC\_{r, t}^{\rm aff}$ is introduced over an arbitrary integral domain $R$ containing $2^{-1}$. These superalgebras can be considered as affinization of walled Brauer superalgebras which are introduced by Jung and Kang. By constructing infinite many homomorphisms from $BC\_{r, t}^{\rm aff}$ to a class of level two walled Brauer-Clifford superagebras over $\mathbb C$, we prove that $BC\_{r, t}^{\rm aff} $ is free over $R$ with infinite rank. We explain that any finite dimensional irreducible $BC\_{r, t}^{\rm aff} $-module over an algebraically closed field $F$ of characteristic not $2$ factors through a cyclotomic quotient of $BC\_{r, t}^{\rm aff} $, called a cyclotomic (or level $k$) walled Brauer-Clifford superalgebra $ BC\_{k, r, t}$. Using a previous method on cyclotomic walled Brauer algebras, we prove that$BC\_{k, r, t}$ is free over $R$ with super rank $(k^{r+t}2^{r+t-1} (r+t)!, k^{r+t}2^{r+t-1} (r+t)!)$ if and only if it is admissible. Finally, we prove that the degenerate affine walled Brauer-Clifford superalgebras defined by Comes and Kujawa are isomorphic to our affine walled Brauer-Clifford superalgebras. This is a joint work with Mengmeng Gao, Hebing Rui and Yucai Su.

## 个人简介：宋林亮博士毕业于华东师范大学数学系，研究方向为与李理论相关的各类结合代数表示理论。现任职于同济大学数学系。

