**Supervisor: Dr Y Bazlov**

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| 1 | Project Title | Topics in modern representation theory | | |
| 2 | Category | Pure | | |
| 3 | Level | 4 | | |
| 4 | Semesters  (length of project) | 2 | | |
| 5 | Description | This is an advanced project in algebra aimed at 4th year students who will have already had some exposure to representation theory of groups or Lie algebras, either via courses/projects or via summer reading. The goal will be to study an area of current research interest in some depth and possibly to contribute to it by solving a research-level problem. Topics may include group actions on noncommutative rings, categories of representations of quantum groups, Dunkl operators, rational Cherednik algebras, applications of group cohomology. | | |
| 6 | References | Research and expository papers, depending on a topic chosen | | |
| 7 | Prerequisite courses | Advanced algebra courses |  |  |
| 8 | Additional notes |  | | |