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<th><strong>Title</strong></th>
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<tr>
<td><strong>Author(s)</strong></td>
<td>Kanika, Jain</td>
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**A Multiagent model of Sexual Selection in Malaysian diopsids**

**Area of Research**

**SEXUAL SELECTION**

- **Good genes Hypothesis**
  - A female chooses a male for an enhanced trait so that her progeny has a good genetic constitution

- **Fisher’s Runaway Hypothesis**
  - Male progeny inherits better genes for enhanced ornament
  - Female progeny inherits better genes that evolve female preference

**EXPERIMENTAL STUDIES**

- Wet lab experiments: costly
- Simulation studies: biologically inaccurate
- Agent based Model

**Methodology and Simulation**

**Life Cycle**

- Egg
- Larva (maggot)
- Puparium
- Adult

**Simulated Genetic structure**

- Structure of chromosome: Colors represent different abilities

**Observed Simulated Environment**

**Discrete Event Simulation**

- Environment
  - Light
  - Bank
  - Leks
  - Stream
  - Bed
  - Food

- Adult activities
  - Resting
  - Contesting
  - Mating
  - Foraging

**Simulated Larval event**

- Fixed Attributes
  - Eye span
  - Body Size
  - Immunity
  - Stream

**Simulated Adolescent event**

- Fixed Attributes
  - Immunity
  - Size of Sexual organ

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**School of Computer Engineering**
**Project Title**: A Multiagent Model of Sexual Selection in Malaysian Diopsids
**Student**: Kanika Jain
**Supervisor**: Asst. Prof. Tay Joc Cing
**Collaborator**: Prof Andrew Pomiankowski