Report on
IEEE Computational Intelligence Society
Distinguished Lecture Programme

An IEEE Computational Intelligence Society Distinguished Lecture Programme was hosted by the Department of Computer and System Sciences, Visva-Bharati on 14th March, 2021. The event brought together 39 faculty members, researchers, and students from all over India to participate in the said event. The participants were from science and engineering background. This event was hosted in Zoom platform. The event began with opening remarks by Professor Paramartha Datta, Department of Computer and System Sciences, Visva-Bharati on the presence of other faculty members of the department. Prof. Sushmita Mitra, ISI Kolkata and Chair of IEEE Kolkata section welcomed all the participants. Prof. Tandra Pal, NIT Durgapur and Chair of IEEE CIS Kolkata chapter introduced the honorable resource person Prof. Mengjie Zhang from University of Wellington.

Details of the technical sessions can be found in following table.

<table>
<thead>
<tr>
<th>Day</th>
<th>Session 1 (10 AM to 12.30 PM)</th>
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<tbody>
<tr>
<td>14th March, 2021</td>
<td>Evolutionary Machine Learning</td>
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<tr>
<td></td>
<td>Prof. Mengjie Zhang of University of Wellington</td>
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</tbody>
</table>

The event was ended with a vote of thanks delivered by Dr. Indrajit Pan, Vice-Chair of IEEE CIS Kolkata chapter.

The event was coordinated by Mr. Debaditya Barman, Assistant Professor, Department of Computer and System Sciences, Visva-Bharati. We have received very positive feedbacks from the participants. Feedbacks have been summarized in the following section.
Feedbacks from the participants

1. Overall how satisfied were you with this webinar?

![Pie chart showing satisfaction levels]

- Satisfied
- Very Satisfied

2. How informative did you find the webinar?

![Pie chart showing informativeness levels]

- Extremely informative
- Very informative
3. **How clear were the ideas and concepts resource persons presented?**

4. **How likely is it that you would recommend this event to a friend or colleague?**
Some screenshots of the event

**Evolutionary Machine Learning**

- Two categories:
  - Evolutionary learning – A narrow view:
    - EC = Evolutionary optimisation + evolutionary learning
    - EL: EC methods used for learning directly — GP, LCS, AIS, ...
  - EC for Machine Learning – A broad view:
    - Narrow view:
    - Any EC method for any aspect of ML tasks, including automatic finding/optimising the parameter values

**Evolutionary computation for Classification and Feature Manipulation**

- Classifier Construction
  - GAs, PSO: vector representation
  - GP: tree, graph, grid, grammar, other programs
  - LCS: XCS vs UCS, Code fragment, offline vs online
  - AIS: different classification
  - Unbalanced data/class imbalance
  - Missing values: imputation, direct classifiers
- Feature selection and construction