

# Call for Papers

## EDM 2021: the 14th International Conference on Educational Data Mining

Paris, France, June 29—July 2, 2021

<https://educationaldatamining.org/edm2021/>

Last updated on: April 19, 2021

### Shifting Landscape of Education: Improving Blended and Distance Learning

Educational Data Mining is a leading international forum for high-quality research that mines datasets to answer educational research questions, including exploring how people learn and how they teach. These data may originate from a variety of learning contexts, including learning and information management systems, interactive learning environments, intelligent tutoring systems, educational games, and data-rich learning activities. Educational data mining considers a wide variety of types of data, including but not limited to log files, student-produced artifacts, discourse, learning content and context, sensor data, and multi-resource and multimodal streams. The overarching goal of the Educational Data Mining research community is to support learners and teachers more effectively, by developing data-driven understandings of the learning and teaching processes in a wide variety of contexts and for diverse learners.

The 14<sup>th</sup> iteration of the conference, EDM 2021, will take place in a hybrid format, both online and in-person, to facilitate participation and networking for all.

The theme of this year's conference is "Improving Blended and Distance Learning" (BDL). The theme focuses on identifying learning or teaching strategies that can be used to improve learning in various formats, such as partially or fully online, synchronous or asynchronous, and centralized or federated. In addition to the general topics listed below, we welcome research in the following areas: receiving implicit and explicit feedback from learners in BDL environments, interacting with students to ensure no learner is left behind, integrating and utilizing learning analytics in BDL environments to cope with switching between in-person and online modes, and addressing emerging privacy and ethical challenges in the new learning setting.

# Topics of Interest

Topics of interest to the conference include but are not limited to:

- Developing new techniques for mining educational data.
- Closing the loop between EDM research and learning sciences
  - Informing data mining research with educational and/or motivational theories
  - Actionable advice rooted in educational data mining research, experiments, and outcomes
  - Evaluating the efficacy of curriculum and interventions
- Domain Knowledge Modeling
  - Deriving representations of domain knowledge from data
  - Algorithms for discovering relationships, associations, and prerequisite structures between learning resources with different formats, including programming practices, essays, and videos
  - Algorithms to improve existing domain models
  - Novel methods to collect domain knowledge models, including crowd-sourcing and expert tagging
- Educational Recommenders, Instructional Sequencing, and Personalized Learning
  - Learning resource recommendation algorithms, remedial recommendations, and learner choice in selecting the next activity
  - Goal-oriented instructional sequencing
  - Personalized course recommendations
  - Peer recommendation for collaborative learning
  - Offline and online evaluation methods for educational recommender systems and sequencing algorithms
- Equity, Privacy, Transparency, and Fairness
  - Ethical considerations in EDM
  - Legal and social policies to govern EDM
  - Developing privacy-protecting EDM algorithms and detecting learner privacy violations in existing methods
  - Developing and applying fairer learning algorithms, and detecting and correcting instances of algorithmic unfairness in existing methods
  - Developing, improving, and evaluating explainable EDM algorithms
- Learner Cognitive and Behavior Modeling and its association with performance
  - Modeling and detecting students' affective and cognitive states (e.g., engagement, confusion) with multimodal data
  - Temporal patterns in student behavior including gaming the system, procrastination, and sequence modeling
  - Data mining to understand how learners interact with various pedagogical environments such as educational games and exploratory learning environments
- Learner Knowledge and Performance Modeling
  - Automatically assessing student knowledge

- Learner knowledge gain and forgetting models in domains with complex concept structures
- Modeling real-world problem-solving in open-ended domains
- Causal inference of students' learning
- Predicting students' future performance
- Learning analytics
  - Institutional analytics
  - Learner profiling
  - Multimodal analytics
- Social and Collaborative Learning
  - Modeling student and group verbal and non-verbal interactions for collaborative and/or competitive problem-solving
  - Social network analysis of student and teacher interactions
  - Data mining to understand how learners interact in formal and informal educational contexts
  - Peer-assessment modeling
  - Social learner modeling
- Reproducibility
  - Replicating previous studies with larger sample sizes, in different domains, and/or in more diverse contexts
  - Facilitating accessible benchmarking systems and publishing educational datasets that are useful for the community

## Submission Types

For all tracks, **the references section at the end of the paper does not count towards the listed page limits.**

- **Full Papers** — 10 pages. Should describe original, substantive, mature, and unpublished work.
- **Short Papers** — 6 pages. Should describe original, unpublished work. This includes early stage, less developed works in progress.
- **JEDM Journal Track Papers** — Papers submitted to the Journal of Educational Data Mining track (and accepted before May 30, 2021) will be published in JEDM and presented during the JEDM track of the conference.
- **Industry Papers** — 6 pages. Should describe innovative uses of EDM techniques in a commercial setting.
- **Doctoral Consortium** — 2-4 pages. Should describe the graduate/postgraduate student's research topic, proposed contributions, results so far, and aspects of the research on which advice is sought.
- **Posters/Demos** — 2-4 pages. Posters should describe original unpublished work in progress or last-minute results. Demos should describe EDM tools and systems, or educational systems that use EDM techniques.

- **Workshop proposals** — 2-4 pages. Should describe the organizers' plan both to conduct the workshop (e.g., format, rough schedule, proposed list of speakers) and to stimulate growth in the workshop's area of focus. Workshop organizers should indicate whether they would prefer to host their event in a hybrid format (supporting both in-person and remote attendees), or a remote-only format.
- **Tutorial proposals** — 2-4 pages. Should motivate and describe succinctly the field or tool that will be presented, as well as a plan for attendees to learn it in a hands-on way. Tutorial organizers should indicate whether they would prefer to host their event in a hybrid format (supporting both in-person and remote attendees), or a remote-only format.

All accepted papers will be published in the open-access proceedings of the conference, except for the Journal track as stated above. Papers submitted to workshops will be published separately in the workshop proceedings. All paper submissions must be submitted for double-blind reviewing.

Links to existing source code are encouraged, however to keep the double-blind reviewing, we suggest using a service such as Anonymous GitHub (<https://anonymous.4open.science>).

## Submission

All papers should be formatted according to the EDM template:

- Word:  
[https://educationaldatamining.org/edm2020/wp-content/uploads/sites/4/2019/09/edm\\_word\\_template2020.doc](https://educationaldatamining.org/edm2020/wp-content/uploads/sites/4/2019/09/edm_word_template2020.doc)
- LaTeX:  
[https://educationaldatamining.org/edm2020/wp-content/uploads/sites/4/2019/09/edm\\_submission2020.zip](https://educationaldatamining.org/edm2020/wp-content/uploads/sites/4/2019/09/edm_submission2020.zip)

and should be submitted to EasyChair at:

<https://easychair.org/my/conference?conf=edm21>

Once on this page, select the relevant track for your submission, and then follow the submission instructions.

## Special Instructions

### Workshop and Tutorial proposals

Workshop and Tutorial proposals should use the EDM proceedings template (LaTeX or Word) and include at least the following elements:

- Title.

- Length of workshop/tutorial: full or half-day.
- Proposed format of the workshop/tutorial (e.g., approximate timeline) and type of activities (e.g., paper presentations, discussions, demos, etc.).
- Description of the workshop/tutorial content and themes.
- Plans for supporting remote attendees (either as a hybrid or fully-remote event)
- Names, short biographies, and contact information of workshop/tutorial chair(s). For tutorials, this biography must include detailed information about the qualifications of the proposer to conduct the tutorial on the proposed topic. For workshops, include a list of organizing/program committee members, who should be from multiple universities.

## JEDM Track Papers

JEDM track papers should be formatted according to the JEDM guidelines and should be submitted to the journal directly at:

<https://jedm.educationaldatamining.org/index.php/JEDM/about/submissions>

by selecting the option “EDM 2021 Journal Track” in the corresponding Section box.

## Important Dates

JEDM track papers	January 3, 2021
Workshop and Tutorial proposals	January 29, 2021
Acceptance notifications for workshops and tutorials	February 12, 2021
Abstracts for full and short papers	February 26, 2021
Full papers and short papers	March 5, 2021
Industry papers	March 5, 2021
Posters and demos	March 12, 2021

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Doctoral consortium papers	March 12, 2021
Acceptance notifications for full and short papers	April 9, 2021
Acceptance notifications for posters, demos, and doctoral consortium papers	April 23, 2021
Camera-ready copy due	April 30, 2021
Due dates and acceptance notifications for workshop papers	Set by workshop organizers

## Organizing Team

### General Chairs:

- François Bouchet (Sorbonne University, Paris, France)
- Jill-Jênn Vie (Inria, France)

### Program Chairs:

- Sharon Hsiao (Arizona State University, AZ, USA)
- Sherry Sahebi (University at Albany, NY, USA)

### Workshop & Tutorial Chairs:

- Thomas Price (North Carolina State University, NC, USA)
- Sweet San Pedro (ACT, Inc.)

### Industry Track Chairs:

- Giora Alexandron (Weizmann Institute of Science, Israel)
- Niki Gitinabard (North Carolina State University, NC, USA)

### Doctoral Consortium Chairs:

- Min Chi (North Carolina State University, NC, USA)
- Gautam Biswas (Vanderbilt University, TN, USA)

### JEDM Track Chairs:

- Amal Zouaq (Ecole Polytechnique de Montréal, QC, Canada)
- Olga Santos (UNED, Spain)

**Poster & Demo Track Chairs:**

- Ange Tato (Université du Québec à Montréal, QC, Canada)
- Hassan Khosravi (University of Queensland, Australia)

**Publication/Proceedings Chairs:**

- Fatima Harrak (Sorbonne University, Paris, France)
- Cheng-Yu Chung (Arizona State University, AZ, USA)

**Sponsorship Chair:**

- Benoît Choffin (Paris-Saclay University, France)

**Publicity/Social Media Chair:**

- Khushboo Thaker (University of Pittsburgh, PA, USA)

**Web Chair:**

- Paul Salvador Inventado (California State University Fullerton, CA, USA)

Looking forward to seeing you at EDM 2021 in Paris!