

# The Mixed Integer Programming Society (MIPS)

February 2022

## 1 Historic Background and Purpose

Mixed Integer Programming is one of the most active and exciting areas of Optimization in general, and Discrete Optimization in particular. Many researchers, working in both academia and industry, have contributed to its development in the last decades. This area has now reached a level of maturity and there is a substantial group of researchers that describe their research as Mixed Integer Programming. We intend to create The Mixed Integer Programming Section to: give all those researchers an “official home” within the Mathematical Optimization Society; formalize rules and ensure continuity of events that the community has been holding in the last decades; promote new activities to enlarge the base of the community and its outreach, within and outside academia.

A catalyst event for the creation of the community has been the Mixed Integer Programming Workshop Series, that began in June 2003, as a two day, single track meeting at the initiative of Daniel Bienstock, who organized the first workshop at the Computational Optimization Research Center of Columbia University. Its focus was to bring together young researchers, students, and industry working on mixed integer programming. The next meeting was called the “IMA Special Workshop on Mixed-Integer Programming,” and was held at the Institute for Mathematics and its Applications in Minneapolis, MN during July 25-29, 2005. The publicly stated aim was “to bring together both researchers and practitioners in this rapidly developing field, and to foster future collaborations.” This conference attracted approximately 100 delegates from over 10 countries, included 22 invited talks, a poster session and a round table discussion on the future of the field.

Since then, the Mixed Integer Programming Workshop has become a well-established conference serving the MIP community; bringing together researchers, students, and industry actors from around the globe; fostering collaboration; and providing a showcase for students, early career academics, and developments in industry and novel applications.

From its beginnings, the series has kept its single-track, invited speaker form; and poster presentations open to students and postdoctoral researchers. It has been held every year in North America (see the table in ARTICLE 9 for details), with the exception of the 2020 and 2021 editions, which were held online.

An important feature of these meetings has been the emphasis on early career researchers both as program committee members and as invited speakers. This has been a very successful model as it provides an opportunity to early career (pre-tenure) researchers gain visibility in the community both as organizers and as speakers.

In addition, the advent of online seminar series in the MIP community have proved to be instrumental for the dissemination of research. The proposed MIP Section also aims at exploiting this medium to complement the Mixed Integer Programming Workshop, as well as managing a dedicated website to promote the activities of the community.

In what follows, we propose the bylaws of this new Technical Section.

# The Mixed Integer Programming Society

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## CONSTITUTION and BYLAWS

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### ARTICLE 1 – Names

This organization shall be named “The Mixed Integer Programming Society” (MIPS).

### ARTICLE 2 – Purpose and Existence

MIPS exists as a Technical Section of the Mathematical Optimization Society (MOS) and as such is subject to the MOS bylaws for Technical Sections.

MIPS is in charge of guaranteeing the continuity of the community of researchers that recognize their work as Mixed Integer Programming, while at the same time expanding his basis and promoting its outreach within and outside academia. This is achieved through:

- the organization of the Mixed Integer Programming (MIP) Workshop Series;
- the dissemination of research and information related to Mixed Integer Programming through the web.

The governing board of MIPS consists of the COMIPS.

### ARTICLE 3 – The MIPS Committee (COMIPS)

The governing board of MIPS is called the Committee of the Mixed Integer Programming Society (COMIPS). It consists of the chairs of the two previous MIPOCs, plus three members elected by the MIPS members. COMIPS approves the new MIPOC and audits the financial report of the previous MIP workshop within three weeks of the closure of the workshop.

- a) The chair of COMIPS is elected for a one year term and can be elected for at most two consecutive terms. The chair of COMIPS is the chair of the technical session as per MOS bylaws.
- b) The chair of COMIPS organizes and chairs the COMIPS meetings and submits the names of the next MIPOC members together with the financial report of the last MIP Workshop to MOS.

- c) The MIPS members will elect three members of the COMIPS, each serving for a two-year term. Only members of MIPS are eligible for this election. All elected members will start the tenure on July 1st of the same year. The election process will be determined by the current COMIPS, which has also the duty of soliciting competent candidates to run for the position.
- d) If one or more of the past MIPOC chairs decline to serve in COMIPS, they are not replaced and the committee works with fewer members.
- e) The COMIPS shall select a Secretary, a Treasurer, and a Webmaster among its members.
  - i. The COMIPS Secretary, the COMIPS Treasurer, and the COMIPS Webmaster are elected by COMIPS for a two-year term (starting on July 1st), for a maximum of two consecutive terms.
  - ii. The COMIPS Treasurer shall oversee the MIPS account and approves the expenses, provide an annual report during the MIP business meeting and present it to the rest of COMIPS. The COMIPS Treasurer is also responsible for communication with the treasurer of the Mathematical Optimization Society. The COMIPS Treasurer shall provide a report of the MIPS account to any individual upon reasonable request.
  - iii. The COMIPS Secretary is responsible for keeping and updating the roll of members of the MIPS, as well as for all communications with the Mathematical Optimization Society (other than those pertaining to the Chair and the Treasurer as described above) and with the members.
  - iv. The Webmaster is responsible for maintaining the MIPS website.

#### **ARTICLE 4 – The Mixed Integer Programming (MIP) Workshop Series**

The MIP workshop is a not-for-profit event that shall be held every year, and its format will be a single-track of presentations by invited speakers. ARTICLE 9 provides a history of these annual workshops. MIP workshops usually take place in Spring or Summer in a North American location and MIPS business meetings are held during the Workshop. The business meetings shall be open to all registered participants of the current workshop.

The MIP Organizing Committee<sup>1</sup> (MIPOC) is responsible for organizing these workshops as well the MIPS Business Meeting that shall take place at each workshop.

#### **Members of MIPOC**

- a) MIPOC shall consist of five members or more, with at least one designated Chair. All Chairs shall be nominated by the previous MIPOC. The Chairs will choose the remain-

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<sup>1</sup>This is the Program/Scientific Committee and does not include the Local Organization Committee.

ing members of the MIPOC and submit the full committee to the current COMIPS for approval.

- b) The MIPOC Chairs shall call MIPOC meetings and preside at the MIPS business meeting at the MIP Workshop.
- c) During each MIPOC meeting, a member is chosen to keep the minutes and the records of the meetings.
- d) The Chairs of the MIPOC shall be early career researchers. An individual may be a MIPOC member for at most two consecutive terms, and a Chair of the MIPOC only once.
- e) The terms for the new MIPOC members shall begin at the close of the previous MIP workshop.
- f) MIPOC may elect new members to the MIPOC to fill vacancies or as needed. It may also create ad hoc committees as needed.

#### **Duties of MIPOC**

- a) MIPOC shall solicit proposals to organize the next MIP and decide on the location of the next MIP. To the fullest extent possible and practicable, proposals should be solicited in such a manner as to ensure that consecutive MIPs are not held in the same state, and the solicitation should be made public.
- b) MIPOC is responsible for creating the MIP program by selecting the invited speakers.
- c) MIPOC shall organize a poster session by selecting poster presenters from amongst the submitted extended abstracts. It will also decide the poster presenters that are granted a travel award and appoint a committee to award a Best Poster Award at the workshop.
- d) MIPOC shall solicit funds from appropriate organizations to enhance the value of the conference. Examples of such enhancements include (i) travel assistance funds for important contributors who would not otherwise be able to attend the conference; (ii) travel assistance funds for student contributors to the workshop; (iii) funds to partially defray the costs of a banquet or other social events.
- e) MIPOC will ask for approval of all expenses to the COMIPS Treasurer.

#### **ARTICLE 5 – Dissemination**

- a) The website of MIPS is managed by the COMIPS Webmaster.

- b) MIPS will organize online seminars covering research topics of interest for the community. Organizers of the seminars are members of MIPS elected for 2-years terms (starting July 1st), for a maximum of 2 consecutive terms. They will be in charge of selecting, introducing, and moderating such seminars. The organizers are elected in a joint session by the current seminar organizers and the COMIPS. Should an organizer position be vacated, the current organizers and COMIPS will jointly decide whether to replace them with a new MIPS member.
- c) The website may contain other research material for the use of members of the society and the promotion of Mixed Integer Programming to the broader public.

## **ARTICLE 6 – Finances**

MIPS will maintain an account that will be administered for MIPS by the Mathematical Optimization Society (MOS). At each MIPS Business meeting, the Treasurer will report the income and expenditures since the previous MIPS Business meeting, as well as the current balance of the account. The report must be approved by a majority of COMIPS members. MOS will not assume any financial risk from MIPS, so the MIPS account balance must always be nonnegative.

## **ARTICLE 7 – Membership**

- a) A person is a member of MIPS if they have registered and attended one of the last three MIP Workshops. A person can request to be a member by contacting the current COMIPS Secretary, and obtaining the approval of the majority of the COMIPS committee. A member can request to be removed as a member of MIPS by contacting the current COMIPS Secretary.
- b) COMIPS can solicit the members' opinions on questions of relevance for The Mixed Integer Programming Society.
- c) All members will be registered in an ad-hoc mailing list communicating updates on the MIP workshops and of important news about the technical society.

## **ARTICLE 8 – Changing the bylaws**

Any changes in the bylaws must be approved by strictly more than 50% of the COMIPS.

## ARTICLE 9 – MIP Workshop History

The following table gives a summary of the MIP Workshops held so far.

Chair	Year	Host	other MIPOC members
Carla Michini and Yuan Zhou	2020-21	Online	Timo Berthold, Yuri Faenza, Robert Hildebrand
Alejandro Toriello	2019	MIT	Daniel Dadush, Miles Lubin, Carla Michini, Yuan Zhou
Giacomo Nannicini	2018	Clemson U.	Philipp Christophel, Simge Küçükyavuz, Ruth Misener, Alejandro Toriello
Fatma Kılınç-Karzan	2017	U. Montreal	Merve Bodur, Daniel Espinoza, Andrea Lodi, Giacomo Nannicini
Alberto Del Pia	2016	U. Miami	Sanjeeb Dash, Fatma Kılınç-Karzan, Dan Steffy, Kati Wolter
Jim Ostrowski	2015	U. Chicago	Jeff Linderoth, Sebastian Pokutta, Domenico Salvagnin, Siqian Shen
Amitabh Basu	2014	Ohio State U.	Tobias Achterberg, Jon Lee, Susan Margulies, Jim Ostrowski
Jim Luedtke	2013	U. Wisc. Madison	Amitabh Basu, Daniel Bienstock, Alberto Del Pia, Santanu Dey
Juan Pablo Vielma	2012	UC Davis	Claudia D'Ambrosio, Matthias Köppe, Jim Luedtke, François Margot
Ted Ralphs	2011	U. Waterloo	Shabbir Ahmed, Ricardo Fukasawa, Juan Pablo Vielma, Giacomo Zambelli
Shabbir Ahmed	2010	Georgia Tech	Ismael Regis de Farias Jr., Ricardo Fukasawa, Matthias Köppe, Andrea Lodi
Alper Atamtürk	2009	UC Berkeley	Pierre Bonami, Ismael Regis de Farias Jr., Jesus De Loera, Simge Küçükyavuz
None	2008	Columbia U.	Simge Küçükyavuz, Quentin Louveaux, Andrew Miller, Gabor Pataki, Jean-Philippe Richard
None	2007	U. Montreal	Oktay Günlük, Matthias Köppe, Andrew Miller, Jean-Philippe Richard
None	2006	U. Miami	Oktay Günlük, Jeff Linderoth, Andrea Lodi, François Margot
None	2005	IMA	Alper Atamtürk, Daniel Bienstock, Sanjeeb Dash, Adam Letchford, Jeff Linderoth
None	2003	Columbia U.	Daniel Bienstock