

The Canadian
Academy of
Engineering



L'Académie
canadienne
du génie

CAE Annual Conference

2024

London, Ontario

Participant Package

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Program Summary - DRAFT

Monday, May 27th

Time	Description	Location*
12:30-1:30pm	Networking Luncheon	Western, ACEB Atrium
1:30-4:00pm	Fellows' Showcase Workshop	Western, ACEB 1450, 1451
4:00-5:00pm	Ontario Section	Western, ACEB 1450
5:00pm	Buses to Ivey Spencer Leadership Center	
5:30-8:00pm	Welcome Reception	Ivey Spencer Leadership Center
8:30pm	Buses back to hotels	

Tuesday, May 28th

Time	Description	Location*
7:45am	Buses to Western	
8:20am-12:00pm	Morning sessions	Western, SEB 1059
12:00-1:00pm	Networking Luncheon	Western, ACEB Atrium
1:00-5:00pm	Afternoon sessions	Western, ACEB 1450
5:40-7:00pm	Reception	Lobby, Richard Ivey Building
7:00-10:00pm	Gala Dinner and Induction Ceremony	Brockhall Dining Room, Richard Ivey Building
10:00pm	Buses back to hotels	

Wednesday, May 29th

Time	Description	Location*
7:45am	Buses to Ivey Spencer Leadership Center	
8:30am-12:00pm	Morning sessions	Ivey Spencer Leadership Center, Maple Leaf Foods Room
12:00-1:00pm	Networking Luncheon	Ivey Spencer Leadership Center, Asher's Dining Room
1:00pm	Buses to hotels and tours	
1:30-3:30pm	Tour of WindEEE/Fraunhauser Tour of West5 and EVE	See Venue Information page
3:30pm	Buses back to hotels	

*Please see detailed location information on the [Venue Information](#) page.

Detailed Program - DRAFT

Monday, May 27th

Time	Description	Location*
12:30-1:30pm	Networking Luncheon	Western, ACEB Atrium
Sponsored by Western Engineering; Complimentary but please register prior		
1:30-4:00pm	Fellows' Showcase Workshop	Western, ACEB 1450, 1451

Moderators

Ying Zheng, FCAE, FEIC, Western University

Sarah Shortreed, FCAE, ICD.D

Miriam Capretz, Associate Dean-Research, Western University

Presentations

Baochun Li	Generative AI and Distributed Machine Learning
Yun Hang Hu	Super-structured Materials for Energy Devices
Bruce Taylor	Credible Affordable Decarbonization
Kamiel Gabriel	Scalable Low-Carbon Hydrogen Production Technology Utilizing Waste/Process Heat
Hugh Liu	Autonomous Drone Flight: Where are We?
James Chen	Recent Progress in Laser Materials Processing: from Welding, and Additive Manufacturing to Battery Recycling
Frederic Coulombe	Creating a New Paradigm in Open-Source Hardware
Jie Liang	Privacy-Preserving Activity Sensor for Senior Care and Remote Patient Monitoring
Joshua Pearce	Systems Engineering with the Free Appropriate Sustainability Technologies (FAST) Lab
Shuhui Sun	Next-Generation Battery and Hydrogen Technologies for a Carbon-Neutral Future
Elizabeth Gillies	New Approaches Towards Controlling Polymer Degradation
Hesham El Naggar	Innovative Foundation for Wind Turbines.
Slobodan Simonovic	Rainfall Intensity Duration Frequency Curves for Future Climate Scenarios: A Publicly Accessible Computer Tool IDF_CC

*Please see detailed location information on the [Venue Information](#) page.

Monday, May 27th (continued)

Time	Description	Location*
1:30-4:00pm	Fellows' Showcase Workshop	Western, ACEB 1450, 1451
	Ajay Ray	Innovative Design of Simulated Moving Bed Systems for Purification of Pharmaceutical Drugs
	Steve Hranilovic	Optical Wireless Communications: Bridging Canada's Digital Divide
	Jun Long	Responsibly Developing the Oil Sands Resource through Technological Innovations
	Claude Lague	Controlled-Traffic Farming (CTF) in Production Agriculture
	Liang Song	Online Evolutive Learning towards a Networked AGI
	Marilyn Spink	Critical Minerals
	Franco Berruti	Biocarbon: the most effective solution for carbon sequestration
4:00-5:00pm	Ontario Section	Western, ACEB 1450
	Organizers	
	Jesse Zhu, FCAE, FRSC, Western University	
	Catherine Karakatsanis, FCAE, LL.D, Morrison Hershfield Now Stantec	
5:00pm	Buses to Ivey Spencer Leadership Center	
5:30-8:00pm	Welcome Reception	Ivey Spencer Leadership Center
	Official Welcome - Robert Crawhall, CAE Executive Director	
	Catherine Karakatsanis, CAE President and Conference Co-Chair	
	Ken Coley, Dean of Engineering, Western University	
	Sarah Shortreed, Vice Chair, Board of Governors, Western University	
	Jesse Zhu, Conference Co-Chair	
8:30pm	Buses back to hotels	To Delta, Park

*Please see detailed location information on the [Venue Information](#) page.

Tuesday, May 28th

Time	Description	Location*
7:45am	Buses to Western from hotels	From Delta, Park, Ivey Spencer Leadership Center
8:20am-12:00pm	Morning sessions	Western, SEB 1059
8:20am – 8:40am	<p>Conference Opening: Welcome and Introduction - Jesse Zhu, Conference Co-Chair</p> <p>Catherine Karakatsanis, CAE President and Conference Co-Chair</p> <p>Alan Shepard, President, Western University</p> <p>Robert Crawhall, CAE Executive Director</p>	
8:40am – 8:45am	Group photo, on-site	
8:45am – 9:40am	<p>Keynote Session 1</p> <p>Keynote Speaker</p> <p>Dr. Donna Strickland, Nobel Prize Laureate (2018, Physics): <i>Nonlinear Optics to High-Intensity Laser Physics</i></p> <p>Session Chairs</p> <p>Catherine Karakatsanis, CAE President and Conference Co-Chair</p> <p>Bryan Neff, Associate Vice President-Research, Western University</p>	
9:40am – 10:00am	Break – DaVinci's Café, SEB Ground Floor	
10:00am – 11:00pm	<p>Panel Discussion on CAE – the Past, the Present and the Future</p> <p>Moderators</p> <p>Catherine Karakatsanis, CAE President and Conference Co-Chair</p> <p>Jesse Zhu, FACE, FRSC, CAE Board Member and Conference Co-Chair</p> <p>Panelist</p> <p>Soheil Asgarpour, FCAE, CAE Past President</p> <p>History through Videos</p> <p>Axel Meisen, FCAE, CAE Past President</p>	

*Please see detailed location information on the [Venue Information](#) page.

Tuesday, May 28th (continued)

Time	Description	Location*
8:20am-12:00pm	Morning sessions	Western, SEB 1059
11:00am – 12:00pm	<p>Panel Discussion on From Lab to Market: Transforming Cleantech Innovations into Practical Applications</p> <p>Moderator</p> <p>Ted Mao, FCAE, Chief Technology Officer, Evercloak</p> <p>Panelists</p> <p>Mr. Marv DeVries, Past President, Trojan Technologies</p> <p>Mr. Michael Soligo, FCAE, President & CEO, RWDI</p> <p>Leo Lau, FCAE, Linyi University, and University of Science and Technology Beijing</p>	
12:00-1:00pm	Networking Luncheon	Western, ACEB Atrium
1:00-5:00pm	Afternoon sessions	Western, ACEB 1450
1:00pm – 1:40pm	<p>Keynote Session 2</p> <p>Keynote Speaker</p> <p>Dr. Mark Daley, Chief AI Officer, Western University: Specialization is for insects: being a human engineer in an AI-soaked world</p> <p>Session Chair</p> <p>Miriam Capretz, Associate Dean-Research, Engineering, Western University</p>	

*Please see detailed location information on the [Venue Information](#) page.

Tuesday, May 28th (continued)

Time	Description	Location*
1:00-5:00pm	Afternoon sessions	Western, ACEB 1450
1:40pm – 2:40pm	Panel Discussion on AI/ML: The Disruptive Force Reshaping Engineering Disciplines	
	Moderator	
	Abdallah Shami, FCAE, Electrical and Computer Engineering, Western University	
	Panelists	
	Mark Daley, Chief AI Officer, Western University	
	Raouf Boutaba, FRSC, FIEEE, FIEC, FCAE, Computer Science, University of Waterloo	
	Baochun Li, FCAE, Electrical and Computer Engineering, University of Toronto	
	Moncef Nehdi, FCAE, Civil Engineering, McMaster University	
2:40pm – 3:00pm	Break – ACEB Atrium	
3:00pm – 4:00pm	Panel Discussion on Quantum Computing: Unleashing New Potentials and Challenges in Engineering	
	Moderator	
	Abdallah Shami, FCAE, Electrical and Computer Engineering, Western University	
	Panelists	
	Julien Chosson, IBM Canada	
	Hemavathi Santhanam, IBM Quantum Ambassador, IBM	
4:00pm – 5:00pm	Panel Discussion on Next-Generation Batteries for EVs	
	Moderator	
	Andy Sun, FCAE, FRSC, Western University	
	Panelists	
	Karim Zaghib, FRSC, Chemical and Materials Engineering, Concordia University	
	Andy Sun, FCAE, FRSC, Western University	

*Please see detailed location information on the [Venue Information](#) page.

Tuesday, May 28th (continued)

Time	Description	Location*
5:40-7:00pm	Reception Across Western Road from Engineering	Lobby, Richard Ivey Building
7:00-10:00pm	Gala Dinner and Induction Ceremony Robert Crawhall, Executive Director Catherine Karakatsanis, CAE President and Conference Co-Chair Penny Pexman, Vice President Research, Western University	Brockhall Dining Room, Richard Ivey Building
10:00pm	Buses back to hotels	To Delta, Park, Ivey Spencer Leadership Center

*Please see detailed location information on the [Venue Information](#) page.

Wednesday, May 29th

Time	Description	Location*
7:45am	Buses to Ivey Spencer Leadership Center	From Delta, Park
8:30am-12:00pm	Morning sessions	Ivey Spencer Leadership Center, Maple Leaf Foods Room
8:30am – 9:30am	<p>Panel Discussion on Infrastructure: Energy and Carbon Emissions Reduction</p> <p>Moderator</p> <p>Andrew Hrymak, FCAE, Chemical and Biochemical Engineering, Western University; Project Leader, Carbon Solutions</p> <p>Panelists</p> <p>Girma Bitsuamlak, Director, WindEEE Research Institute, Western University</p> <p>Ursala Eicker, Canada Excellence Research Chair (CERC) in Smart, Sustainable and Resilient Cities and Communities, Concordia University</p> <p>Steven Pepper, CFO, S2E Technologies</p>	
9:30am – 10:30am	<p>Panel Discussion on Roadmap for Resilient Building</p> <p>Moderator</p> <p>Robert Crawhall, FCAE, Executive Director, Canadian Academy of Engineering</p> <p>Panelists</p> <p>Andreas Athienitis, FCAE, Chair, Concordia Research Chair & Hydro-Quebec Chair, Director, Concordia Centre for Zero Energy Building Studies, Concordia University</p> <p>Ursala Eicker, Canada Excellence Research Chair (CERC) in Smart, Sustainable and Resilient Cities and Communities, Concordia University</p> <p>Caroline Hachem-Vermette, Building, Civil & Environmental Engineering, Concordia University</p> <p>Vinay Sharma, FCAE, CEO, London Hydro</p> <p>Milfred Hammerbacher, CEO S2E Technologies</p>	

*Please see detailed location information on the [Venue Information](#) page.

Wednesday, May 29th (continued)

Time	Description	Location*
8:30am-12:00pm	Morning sessions	Ivey Spencer Leadership Center, Maple Leaf Foods Room
10:30am – 10:45am	Break	
10:45am – 11:45am	Panel Discussion on the Changing Nature of Severe Summer Storms and the Impact on Engineering Design	
	Moderator	
	Greg Kopp, FCAE, Civil Engineering, Western University	
	Panelists	
	David Sills, Executive Director of Northern Tornadoes Project	
	Keith Porter, Chief Engineer, Institute for Catastrophic Loss Reduction	
11:45am – 12:00pm	Closing Remarks – Jesse Zhu, Conference Co-Chair	
	Catherine Karakatsanis, CAE President and Conference Co-Chair	
	Robert Crawhall, CAE Executive Director	
12:00-1:00pm	Networking Luncheon	Ivey Spencer Leadership Center, Asher's Dining Room
1:00pm	Buses to hotels and tours	To Delta, Park, Tours
1:30-3:30pm	Tour of WindEEE/Fraunhauser Tour of West5 and EVE	See Venue Information page
3:30pm	Buses back to hotels	To Delta, Park, Ivey Spencer Leadership Center

*Please see detailed location information on the [Venue Information](#) page.

Sponsors

Gold



Western

SCHULICH
School of Engineering



Venue Information

The 2024 CAE Annual Conference will take place in two locations, the gala at a third, and the Wednesday afternoon guided tours at two more. There are similarities in names between the venues so please ensure that you know where you are going.

A map is provided on the next page.

Ivey Spencer Leadership Centre

551 Windermere Rd, London, ON N5X 2T1
519.679.4546

- Business meetings (afternoon of Monday, May 27th)
- Welcome Reception (evening of Monday, May 27th) - Pavilion (the “Tent”)
- Morning sessions (Wednesday, May 29th) - Maple Leaf Foods Room
- Lunch (Wednesday, May 29th) - Asher's Dining Room

Western's Ivey School of Business Banquet Hall, Richard Ivey Building

1255 Western Rd, London, ON N6G 0N1
519.661.3206

- Gala Dinner and Induction Ceremony (evening of Tuesday, May 28th)
 - Reception - Lobby
 - Dinner - Brockhall Dining Room

Western University's Engineering Campus

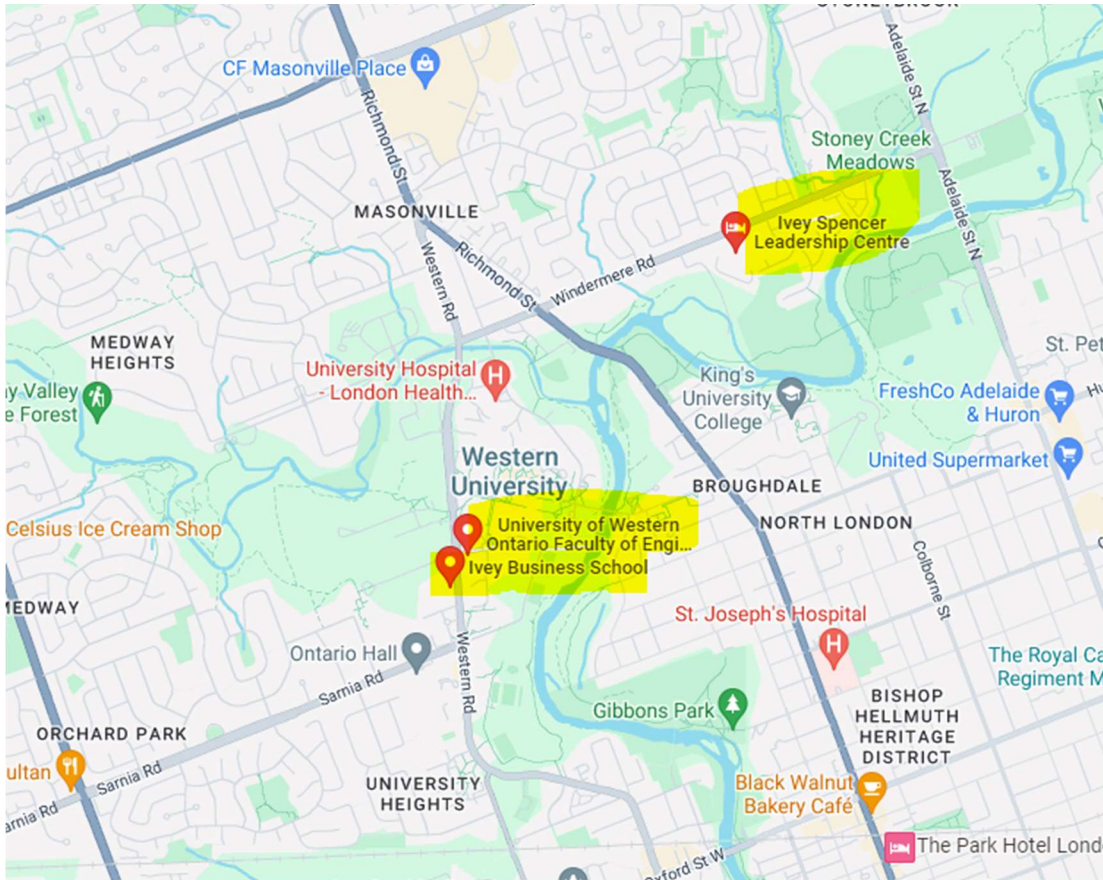
1151 Richmond St, London, ON N6A 3K7
519.661.2128

Amit Chakma Engineering Building (ACEB)

- Networking Luncheon (Monday, May 27th, Tuesday, May 28th) - ACEB Atrium
- Fellows' Showcase (afternoon of Monday, May 27th) - ACEB1450, 1451
- Afternoon sessions (Tuesday, May 28th) - ACEB 1450

Spencer Engineering Building (SEB)

- Morning sessions (Tuesday, May 28th) - SEB 1059



Western WindEEE Research Institute and Fraunhofer Innovation Platform for Composites Research

WindEEE: 2535 Advanced Ave, London, ON N6M 0E2

Fraunhofer: 2520 Advanced Ave, London, ON N6M 0E1

- Guided tour option (afternoon of Wednesday, May 29th) – bussing provided

West 5 and EVE, London Sustainable Living

West 5: 1400 Riverbend Rd, London, ON N6K 0G8

EVE: 2100 Lumen Dr, London, ON N6K 0L3

- Guided tour option (afternoon of Wednesday, May 29th) – bussing provided

Accommodations & Transportation

A shuttle bus service will be available from the Ivey Spencer Leadership Centre, the Park Hotel, and the Delta Hotel to and from the various conference locations (see the Program for details and times). Transportation between venues and between hotels can also be done using personal vehicles. Parking passes are available for those who arrange them in advance.

A map is provided on the next page.

Room blocks with special rates has been negotiated at the following venues:

Ivey Spencer Leadership Centre

551 Windermere Road, London, ON N5X 2T1, (519) 679-4546

Nightly Rate at \$194 (includes breakfast) plus applicable taxes and fees.

Reservation can be made by calling (519) 679-4546 and asking for the “Canadian Academy of Engineers Conference” block or online at [this link](#).

The Park Hotel-London

242 Pall Mall Street, London, ON N6A 5P6, (519) 642-4444

Nightly rate is \$189 (includes continental breakfast) plus applicable taxes and fees

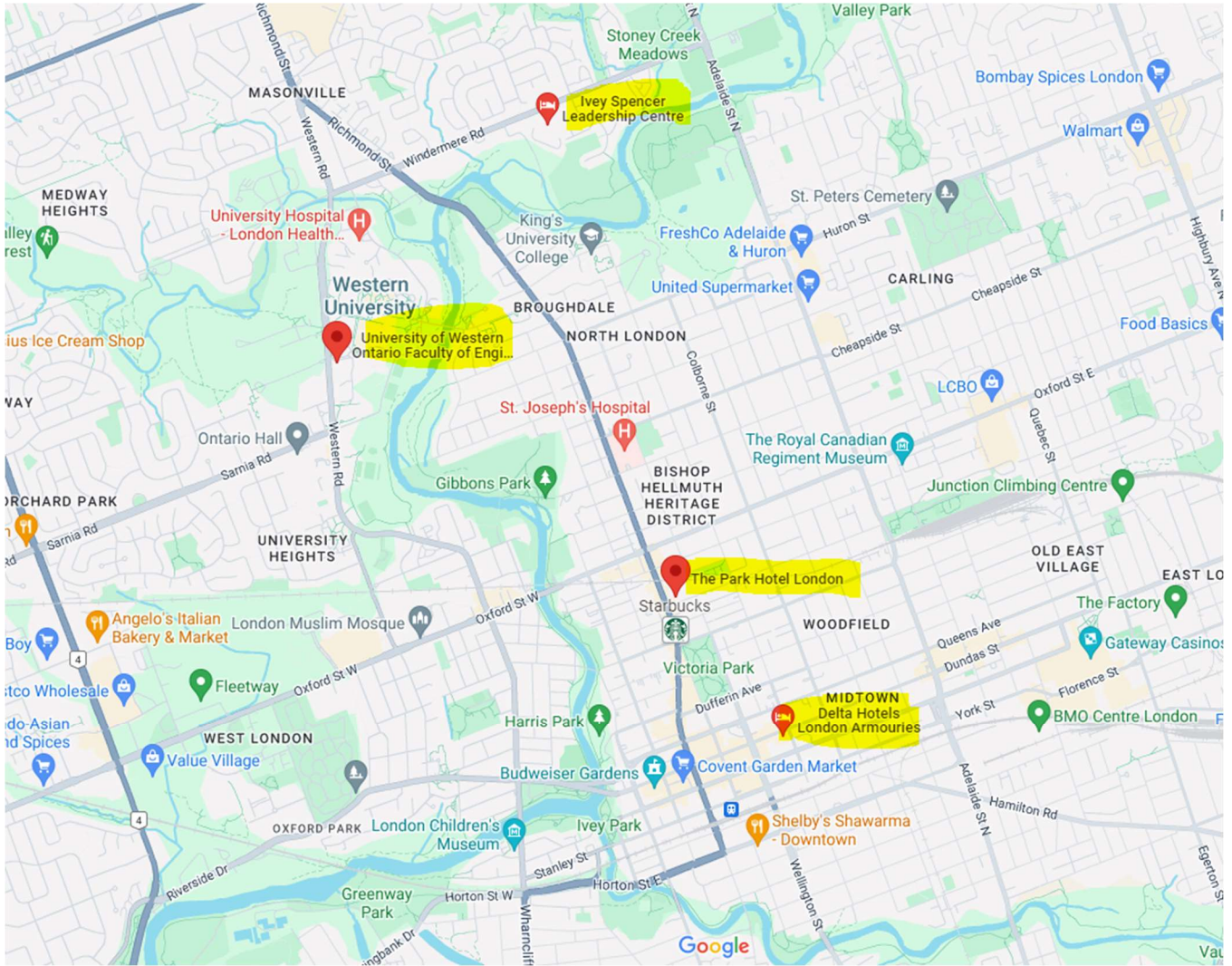
Reservations can be made by calling (519) 642-4444 and asking for the “Canadian Academy of Engineers Conference” block or online at [this link](#).

Delta Hotels London Armouries

325 Dundas Street, London, Ontario N6B 1T9, (519) 679-6111

Nightly rate is \$189 plus applicable taxes and fees

Reservations can be made by calling (519) 679-6111 and asking for the “Canadian Academy of Engineers Conference” block or online at [this link](#).



Contact Information

General information, pre-conference	613.235.9056	ncardin@cae-acg.ca
General information, at conference	613.235.9056 (call) 613.302.1185 (text)	ncardin@cae-acg.ca
Conference programming		Ying.Zheng@uwo.ca jzhu@uwo.ca

CAE Annual Conference Organizing Team

Canadian Academy of Engineering

Robert Crawhall	Executive Director
Chris Frantz	Project Manager
Nancy Cardin	Administrative Coordinator

Conference Committee

Co-Chairs

Jesse Zhu	Western University
Catherine Karakatsanis	Morrison Hershfield Now Stantec

Program/Local Logistics Committee

Jesse Zhu	Co-Chair
Andy Hrymak	Co-Chair
Ying Zheng	Co-Chair
Abdallah Shami	Member
MemGreg Kopp	Member
Ted Mao	Member
Andy Sun	Member
Tony Straatman	Member
Ken Coley	Member
Sarah Shortreed	Member
Miriam Capretz	Member
Susan Chapman	Member