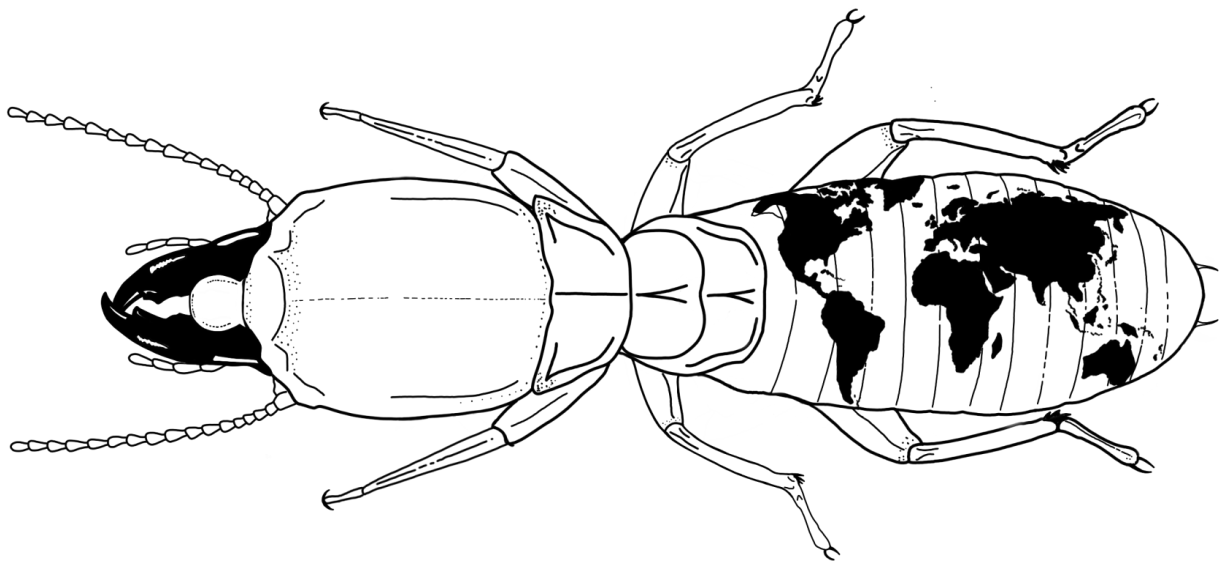


International Termite Course 2022

University of Florida



June 23-30, 2022

Ft. Lauderdale Research and Education Center

3205 College Avenue | Davie FL, 33314

UF | IFAS
UNIVERSITY of FLORIDA

International Termite Course 2022

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University of Florida, 3205 College Ave., Ft. Lauderdale, FL 33314

<https://conference.ifas.ufl.edu/termite/>

Contact **Thomas Chouvenc** for information about registrations: tomchouv@ufl.edu

Dates: Registration Deadline is May 1st, 2022

Event: June 23-30, 2022

Location: FLREC Teaching Lab Rm 121 and seminar room T103-104

Instructors: (Alphabetically)

Dr. Anthony Auletta	University of Florida	anthonyauletta@ufl.edu
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Dr. Tiago Carrijo	Univ. ABC Brazil	tiagocarrijo@gmail.com
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Dr. Jan Šobotník	Czech Univ. Prague	sobotni.j@gmail.com
Dr. Nan-Yao Su	University of Florida	nysu@ufl.edu
Dr Qian 'Karen' Sun	Louisiana State Univ.	qsun@agcenter.lsu.edu
Dr Ed Vargo	Texas A&M University	edward.vargo@ag.tamu.edu

Course Objectives:

- This course is designed for graduate students, Post-Docs and Faculties who want to learn about termites.
- This course provides a unique opportunity to obtain in-depth knowledge about termite biology with a strong emphasis on ecology and evolution. This 60+ hours workshop will include extensive lectures provided by guest speakers from around the world. If you are interested in social insects overall, this course is for you.
- Students will learn and gain experience in a range of techniques for the collection, rearing of termite species and get familiar with termite control methods.
- Graduate students participating to the course will be given the opportunity to give a 10min presentation of their graduate research project in a student mini-symposium.

	Thursday 23-Jun	Friday 24-Jun
Time	Termite diversity and phylogeny	General termite families biology eusociality and Evolution
7:30	Registration	Coffee
7:45	Lobby	Snacks
8:00	Introduction and presentation	Biology and ecology of "minor" lower families
8:15	Thomas Chouvenc	Thomas Bourguignon
8:30		
8:45	Terminology, life cycle, anatomy, termite research history	Biology and ecology of Kalotermitidae
9:00	Thomas Chouvenc	Rudi Scheffrahn
9:15		
9:30	Break	Biology and ecology of Rhinotermitidae
9:45	Natural history of termites	Nan-Yao Su
10:00	Rudi Scheffrahn	
10:15		Break
10:30		Biology and ecology of Termitidae
10:45	Termites of the world- overview of termite diversity	Rudi Scheffrahn
11:00	Jan Šobotník	
11:15		Insects societies
11:30		Anthony Auletta
11:45		
12:00	Lunch	Lunch
12:15		
12:30		
12:45		
13:00	Termite diversification through time	Evolutionary convergence in eusocial systems
13:15	Tiago Carrijo	Ed Vargo
13:30		
13:45	Termites at the geological time scale	
14:00	Michael Engel	Evolution of eusociality in termites
14:15		Thomas Chouvenc
14:30		
14:45	Termite Phylogenetic tools	
15:00	Ales Bucek	
15:15	Break	Break
15:30	Termite phylogeny and biogeography	Origin of eusociality (alternative talk)
15:45	Ales Bucek	Yves Roisin
16:00		
16:15		Evolution of worker and soldier castes
16:30		Thomas Bourguignon
16:45	Termite feeding groups and ecology	
17:00	Jan Šobotník	
17:15		
17:30		
17:45	Welcome Diner /movie	
18:00	Jan Šobotník	
18:15	Social open ended	

	Saturday 25-jun	Sunday 26-Jun	
Time	Symbiosis, mutualism, parasitism in termites	Digestion, physiology, caste regulation, breeding strategies in termites	
7:30	Coffee	Coffee	
7:45	Snacks	Snacks	
8:00	Symbiosis in cockroaches and their implication on termites	Gut morphologies and functions	
8:15	Aram Mikaelyan	Tiago Carrijo	
8:30	Protozoa biology, evolution and diversity in termites	Digestion and Physiology in wood-feeding termites	
8:45		Michael Scharf	
9:00		Gillian Gile	
9:15		Break	
9:30			
9:45			
10:00	Microbiota inside and outside termites	Diversity of caste patterns	
10:15		Yves Roisin	
10:30		Break	
10:45			
11:00			
11:15	Caste differentiation and regulation in lower termites		
11:30	Michael Scharf		
11:45	Lunch	Lunch	
12:00			
12:15			
12:30			
12:45			
13:00	Termite diversification: a symbiont perspectives	Colony foundation and demographic changes over time	
13:15	Thomas Bourguignon	Thomas Chouvenc	
13:30	Termitomyces in Macroterminae	Genomic imprinting in termites and AQS	
13:45			Kenji Matsuura
14:00			Hou-Feng Li
14:15	Break	Break	
14:30			
14:45			
15:00	Fungal parasites in termite nests and host manipulations	Breeding strategies in termites and population genetics	
15:15	Kenji Matsuura		
15:30	Termitophytes biology and diversity		
15:45			Ed Vargo
16:00			
16:15	Hou-Feng Li		
16:30	Fly Parasitoids in termites	Overview and preparations for field trip	
16:45			Ales Bucek
17:00			Aaron Mullins

	Monday 27-jun	Tuesday 28-Jun	Wednesday 29-Jun
Time	Field trip and Student symposium	Termite behavior and communication	Termites and people around the world
7:30	Coffee	Coffee	Coffee
7:45	Snacks	Snacks	Snacks
8:00	Preparation	Self organization in termites	An African perspective
8:15	meet at	Kenji Matsuura	Yves Roisin
8:30	Secret wood		A Neotropical perspective
8:45	Field trip	Pheromone and vibratory communication	Tiago Carrijo
9:00	Aaron Mullins	David Sillam-Dussès	A Southeast Asian perspective
9:15			Hou-Feng Li
9:30	Park opens at 9:00Am		A north American perspective
9:45			Rudi Scheffrahn
10:00			Break
10:15		Break	A New Guinea perspective
10:30		Defense strategies in termites	Yves Roisin
10:45		Jan Šobotník	An Australian perspective
11:00			Thomas Bourguignon
11:15			Terms in termite biology and controversy led by Tiago Carrijo
11:30	Return to		Fun Group discussion
11:45	FLREC		
12:00	Lunch	Lunch	Lunch
12:15			
12:30			
12:45			
13:00		Policing and Reproduction in termites	Citizen science and artificial intelligence
13:15		Qian Sun	Hou-Feng Li + Ales Bucek
13:30	Graduate Student mini-symposium		Lab rearing, Kalotermitid (Scheffrahn)
13:45			Lab rearing, Reticulitermes (Matsuura)
14:00		Polyethism in termites I	Lab rearing, Coptotermes (Chouvenc)
14:15		Thomas Chouvenc	Lab rearing, Termitid (Sillam-Dusses)
14:30	Part 1		
14:45		Break	Break
15:00	Break	Polyethism in termites II	Rotations, 3 groups:
15:15		Kenji Matsuura	Lab tour
15:30			Drywood termite damage
15:45	Graduate Student mini-symposium	Foraging strategies in termites	Subterranean termite damage
16:00		David Sillam-Dussès	Invasive termites and bridgehead effect
16:15			Ed Vargo
16:30	Part 2	The termite way of the dead	
16:45		Qian Sun	
17:00			

	Thursday 30-Jun	Friday 1-Jul
Time	Termite pest management and applied research	Lab ID Optional
7:30	Coffee	<p>BONUS</p> <p>If you are still around</p> <p>Center and lab open all day for termite ID session in room 121 with microscope</p>
7:45	Snacks	
8:00	Termite pest species in the world and termite control research	
8:15	Thomas Chouvenc	
8:30	Living with termites, a New Orleans perspective	
8:45	Aaron Mullins	
9:00	Drywood termite control techniques	
9:15	Rudi Scheffrahn	
9:30	Liquid termiticides treatments	
9:45	Bill Kern	
10:00	Break	
10:15	Principle of IPM and introduction of baits	
10:30	Nan-Yao Su	
10:45		
11:00		
11:15		
11:30	Egg tending behavior and control implications	
11:45	Kenji Matsuura	
12:00		
12:15	Lunch	
12:30		
12:45		
13:00	Biocontrol and termite immunity	
13:15	Thomas Chouvenc	
13:30		
13:45		
14:00	Termites in trees and their control	
14:15	Hou-Feng Li	
14:30		
14:45	Break	
15:00	Colony demographics and termite control strategies	
15:15	Thomas Chouvenc	
15:30		
15:45		
16:00		
16:15	Conclusion	
16:30		
16:45	Strudent Award Ceremony	
17:00		
17:15	Farewell Diner	
17:30		
17:45	Social	
18:00	open ended	

Please keep in mind that:

- We are 15min away from the beach
- We are 45 min away from the Everglades national parks
- We have a diverse fauna of **social hymenoptera** in various parks in the area.
- The lab will be open for more identification sessions if needed.
- Butterfly World is 30 min away
- Fairchild Botanical garden is 45 min away.

If you plan on doing group activities, we can help you organize it, per your request.

Recommended Literature

- Bennett, G. W., J. M. Owens, and R. M. Corrigan. 1997.** Truman's Scientific Guide to Pest Control Operations, fifth edition. Purdue University and Advanstar Communications, Cleveland, Ohio, 520 pp.
- Ebling, W. 1978.** Urban Entomology, 2nd ed. Univ. Calif. 695 pp.
- Krishna, K. and F. M. Weesner. 1969.** Biology of Termites I. Academic Press, New York.
- Krishna, K. and F. M. Weesner. 1970.** Biology of Termites II. Academic Press, New York.
- Edwards, R. and A. E. Mill. 1986.** Termites in Buildings: Their biology and control. Rentokil Limited, East Grinstead, UK. 261 pp.
- Grassé, P.P. 1982-1985.** Termitologia (3 volumes) Masson, Paris.
- Abe, T., D.E. Bignell, M. Higashi and T. Higashi. 2000.** Termites: Evolution, sociality, symbioses, ecology. Springer.
- Mallis, A. 2004.** Handbook of pest control, 9th ed. Mallis Handbook & Technical Training Comp. 1456 pp.
- Bignell, D.E. 2010.** Biology of termites, a modern synthesis. Springer.

Online Resources

Krishna, Kumar.; Grimaldi, David A.; Krishna, Valerie.; Engel, Michael S 2013. Treatise on the Isoptera of the world. (Bulletin of the American Museum of Natural History, no. 377): <http://digitallibrary.amnh.org/handle/2246/6430>

Constantino's Termite database:
<http://www.termitologia.net/>

Šobotník's termite photo gallery:
<https://termiti.fld.czu.cz/en/r-12998-galleries/r-13019-termites>

Scheffrahn's termite database:
<https://www.rudolfscheffrahn.com/>

FLREC, Ft Lauderdale Research and Education Center map:
<https://flrec.ifas.ufl.edu/termites-in-florida/>

THANKS FOR ATTENDING

THE 2022 TERMITE COURSE

