

## Program for FroCoS 2019 and TABLEAUX 2019

Both FroCoS and TABLEAUX will take place in the **Hatchcroft** building, located in the Middlesex University campus: FroCoS in room **H116** (first floor) and TABLEAUX in room **HG19** (ground floor). A map of the campus can be found at <https://unihub.mdx.ac.uk/campus/hendon/campus-map>. For the program of Automated Reasoning Workshop (ARW) 2019, lasting for 1.5 days on September 2nd–3rd 2019, please see <https://www.arw2019.org/ARW%202019%20Programme.pdf>.

### Monday, September 2nd 2019 – Tutorial Day

	<b>How to Build an Automated Theorem Prover: An Introductory Tutorial</b> , by Jens Otten (room HG19)	<b>Formalising Concurrent Computation: CLF, Celf, and Applications</b> , by Sonia Marin (room H116)
10:30–11:00	Registration and Coffee	
11:00–12:30	Part 1: ATP, Proof Calculi and Prolog - Part 1(a): ATP and Proof Calculi - Part 1(b): Prolog	
12:30–13:30	Lunch ( <b>College Building, 1<sup>st</sup> floor mezzanine</b> )	
13:30–15:00	Part 2: Implementing a Prover - Part 2(a): Implementing a Propositional Prover - Part 2(b): Implementing a First-Order Prover	Part 1
15:00–15:30	Registration and Coffee	
15:30–17:00	Part 3: Tableau and Connection Provers - Part 3(a): A Tableau Prover - Part 3(b): A Connection Prover	Part 2
17:00–17:30	Coffee	

## Tuesday, September 3rd 2019

	TABLEAUX (room HG19)	FroCoS
08:45–09:00	Registration and Coffee	
09:00–09:10	Welcome to TABLEAUX	
	Tableau Calculi I (chair: Serenella Cerrito)	
09:10–09:40	<i>A SAT-based encoding of the one-pass and tree-shaped tableau system for LTL</i> Luca Geatti, Nicola Gigante and Angelo Montanari	
09:40–10:10	<i>Certification of Nonclausal Connection Tableaux Proofs</i> Michael Färber and Cezary Kaliszyk	
10:10–10:40	<i>Preferential Tableaux for Contextual Defeasible ALC</i> Arina Britz and Ivan Varzinczak	
10:40–11:00	Coffee	
	Tableau Calculi II (chair: Claudia Nalon)	
11:00–11:30	<i>A Tableau Calculus for Non-Clausal Maximum Satisfiability</i> Chu-Min Li, Felip Manyà and Joan Ramon Soler	
11:30–12:00	<i>Tableau-based translation from first-order logic to modal logic (work in progress)</i> Tin Perkov	
	Automated Theorem Provers I (chair: Jens Otten)	
12:00–12:30	<i>Herbrand constructivization for automated intuitionistic theorem proving</i> Gabriel Ebner	
12:30–13:30	Lunch ( <b>College Building, 2<sup>nd</sup> floor mezzanine</b> )	
	Automated Theorem Provers II (chair: Jens Otten)	
13:30–14:00	<i>ENIGMAWatch: ProofWatch Meets ENIGMA</i> Zarathustra Goertzel, Jan Jakubuv and Josef Urban	
	TABLEAUX Invited Talk (chair: Serenella Cerrito)	
14:00–15:00	<i>Remembering Roy Dyckhoff</i> Stéphane Graham-Lengrand and Sara Negri	
15:00–15:30	Coffee	
	<b>Journeys in Computational Logic: Tributes to Roy Dyckhoff – Affiliated Workshop</b> Website: <a href="https://tableaux2019.org/Roy_Dyckhoff_Tributes.html">https://tableaux2019.org/Roy_Dyckhoff_Tributes.html</a>	
15:30–19:00	List of speakers: Alessio Guglielmi, Jacob Howe, Jael Kriener, James McKinna, Mehrnoosh Sadrzadeh, Peter Schroeder-Heister, Christian Urban.	
19:00–20:00	FroCoS/TABLEAUX Welcome Reception ( <b>MDX House</b> )	

# Wednesday, September 4th 2019

	TABLEAUX (room HG19)	FroCoS (room H116)
08:45–09:00	Registration and Coffee	
09:00–09:10		Welcome to FroCoS
	TABLEAUX / FroCoS Joint Invited Talk (chair: Andrei Popescu) (room H116)	
09:10–10:10	<i>Automated Reasoning for the Working Mathematician</i> Jeremy Avigad	
10:10–10:30	Coffee	
	Sequent Calculi I (chair: Elaine Pimentel)	Combinations of Systems (chair: Renate Schmidt)
10:30–11:00	<i>First-order Quasi-canonical Proof Systems</i> Yotam Dvir and Arnon Avron	<i>Transforming Derivational Complexity of Term Rewriting to Runtime Complexity</i> Carsten Fuhs
11:00–11:30	<i>Bounded sequent calculi for non-classical logics via hypersequents</i> Agata Ciabattoni, Timo Lang and Revantha Ramanayake	<i>Ilinva: Using Abduction to Generate Loop Invariants</i> Mnacho Echenim, Nicolas Peltier and Yanis Sellami
11:30–12:00	<i>A proof-theoretic perspective on SMT-solving for intuitionistic propositional logic</i> Camillo Fiorentini, Rajeev Goré and Stéphane Graham-Lengrand	<i>An Algebra of Modular Systems: Static and Dynamic Perspectives</i> Eugenia Ternovska
12:00–12:30	<i>Relating Labelled and Label-Free Bunched Calculi in BI Logic</i> Daniel Mery, Didier Galmiche and Michel Marti	<i>Mechanised Assessment of Complex Natural-Language Arguments using Expressive Logic Combinations</i> David Fuenmayor and Christoph Benzmüller
12:30–14:00	Lunch (College Building, 2 <sup>nd</sup> floor mezzanine)	
		FroCoS Invited Talk (chair: Christoph Weidenbach)
14:00–15:00		<i>Conflict-Driven Reasoning in Unions of Theories</i> Maria Paola Bonacina
15:00–15:30	Coffee	
	Sequent Calculi II (chair: Didier Galmiche)	Automated Theorem Proving and Model Building (chair: Pascal Fontaine)
15:30–16:00	<i>Sequentialising nested systems</i> Elaine Pimentel, Revantha Ramanayake and Björn Lellmann	<i>Symmetry Avoidance in MACE-Style Finite Model Finding</i> Giles Reger, Martin Riemer and Martin Suda
16:00–16:30	<i>A Hypersequent Calculus with Clusters for Data Logic over Ordinals</i> Anthony Lick	<i>On the Expressivity and Applicability of Model Representation Formalisms</i> Andreas Teucke, Marco Voigt and Christoph Weidenbach
16:30–17:00	<i>Syntactic cut-elimination and backward proof-search for tense logic via linear nested sequents</i> Rajeev Goré and Bjoern Lellmann	<i>A Neurally-Guided, Parallel Theorem Prover</i> Michael Rawson and Giles Reger
17:00–17:30	<i>Combining monotone and normal modal logic in nested sequents – with countermodels</i> <b>TABLEAUX Best Paper Award</b> Bjoern Lellmann	<i>A Language-Independent Framework for Reasoning about Preferences for Declarative Problem Solving</i> Alireza Ensan and Eugenia Ternovska
17:30–17:45	Coffee	
17:45–19:00	10 minutes walk from the university to the tube station + 30 minutes by tube	
19:00–22:00	Conference Dinner at Strada Riverside ( <a href="https://strada.co.uk/locations/riverside-london">https://strada.co.uk/locations/riverside-london</a> ), Central London	

# Thursday, September 5th 2019

	TABLEAUX (room HG19)	FroCoS (room H116)
08:45–09:00	Registration and Coffee	
	FroCoS/TABLEAUX Joint Invited Talk (chair: Andreas Herzig) ( <b>room H116</b> )	
09:00–10:00	<i>Modularity and Automated Reasoning in Description Logics</i> Uli Sattler	
10:00–10:30	Coffee	
	Semantics (chair: Björn Lellmann)	Interactive Theorem Proving (chair: Andrei Popescu)
10:30–11:00	<i>A Game Model for Proofs with Costs</i> <b>TABLEAUX Best Junior Paper Award (Timo Lang)</b> Timo Lang, Carlos Olarte, Elaine Pimentel and Christian Fermüller	<i>Verifying an Incremental Theory Solver for Linear Arithmetic in Isabelle/HOL</i> Ralph Bottesch, Max W. Haslbeck and René Thiemann
11:00–11:30	<i>Birkhoff Completeness for Hybrid-Dynamic First-Order Logic</i> Daniel Găină and Ionuț Țuțu	<i>Verifying Randomised Social Choice</i> <b>FroCoS Best Junior Paper Award</b> Manuel Eberl
	Combinatorial Proofs (chair: Sara Negri)	Constraint Solving (chair: Claudia Nalon)
11:30–12:00	<i>Towards a Combinatorial Proof Theory</i> Benjamin Ralph and Lutz Straßburger	<i>A CDCL-style calculus for solving non-linear constraints</i> <b>FroCoS Best Paper Award</b> Franz Brauße, Konstantin Korovin, Margarita Korovina and Norbert Th. Müller
12:00–12:30	<i>On Combinatorial Proofs for Modal Logic</i> Matteo Acclavio and Lutz Straßburger	<i>Restricted cutting plane proofs in Horn constraint systems</i> Hans Kleine Büning, Piotr Wojciechowski, Ramaswamy Chandrasekaran and K. Subramani
12:30–13:30	Lunch ( <b>College Building, 2<sup>nd</sup> floor mezzanine</b> )	
	Non-Wellfounded Proof Systems (chair: Anupam Das)	Description Logics (chair: Uli Sattler)
13:30–14:00	<i>Infinets: The parallel syntax for non-wellfounded proof-theory</i> Abhishek De and Alexis Saurin	<i>The Complexity of the Consistency Problem in the Probabilistic Description Logic <math>ALC^{ME}</math></i> Franz Baader, Andreas Ecke, Gabriele Kern-Isberner and Marco Wilhelm
14:00–14:30	<i>PSPACE-Completeness of a Thread Criterion for Circular Proofs in Linear Logic with Least and Greatest Fixed Points</i> Rémi Nolllet, Alexis Saurin and Christine Tasson	<i>Extending Forgetting-Based Abduction using Nominals</i> Warren Del-Pinto and Renate A. Schmidt
14:30–15:00	<i>A Non-wellfounded, Labelled Proof System for Propositional Dynamic Logic</i> Simon Docherty and Reuben Rowe	<i>On the Expressive Power of Description Logics with Cardinality Constraints on Finite and Infinite Sets</i> <b>FroCoS Best Junior Paper Award (Filippo De Bortoli)</b> Franz Baader and Filippo De Bortoli
15:00–15:30	Coffee	
	Logics for Program/System Verification (chair: Hans de Nivelle)	Modal/Epistemic Logics (chair: Didier Galmiche)
15:30–16:00	<i>Behavioral Program Logic</i> Eduard Kamburjan	
16:00–16:30	<i>Prenex Separation Logic with One Selector Field</i> Mnacho Echenim, Radu Iosif and Nicolas Peltier	<i>Epistemic Reasoning with Byzantine-Faulty Agents</i> Roman Kuznets, Laurent Proserpi, Ulrich Schmid and Krisztina Fruzsa
16:30–17:00	<i>Dynamic Doxastic Differential Dynamic Logic for Belief-Aware Cyber-Physical Systems</i> João G. Martins, André Platzer and Joao Leite	<i>Two is Enough – Bisequent Calculus for <math>S5</math></i> Andrzej Indrzejczak
17:00–17:30	<i>Operational semantics and program verification (using many-sorted hybrid modal logic)</i> Ioana Leuştean, Natalia Moangă and Traian Şerbănuță	
17:30–18:00	Coffee	
18:00–19:00	FroCoS and TABLEAUX Business Meetings	
20:00–22:00	Jazz Concert on Campus, in the <b>Grove Concert Room</b> (a blend of jazz standards and original material) Performers: Reuben Ard ( <a href="http://www.reubenard.com">www.reubenard.com</a> ) with a Middlesex student band	

## Friday, September 6th 2019

	<b>FroCoS (room H116)</b>
08:45–09:00	Registration and Coffee
	FroCoS Invited Talk (chair: Maria Paola Bonacina)
09:00–10:00	<i>Recent and Ongoing Developments of Model-Constructing Satisfiability</i> Stéphane Graham-Lengrand
10:00–10:30	Coffee
	Rewriting and Unification (chair: Franz Baader)
10:30–11:00	<i>On Asymmetric Unification for the Theory of XOR with a Homomorphism</i> Christopher Lynch, Andrew M. Marshall, Catherine Meadows, Paliath Narendran and Veena Ravishankar
11:00–11:30	<i>Reviving Basic Narrowing Modulo</i> Dohan Kim, Christopher Lynch and Paliath Narendran
11:30–12:00	<i>Automated Proofs of Unique Normal Forms w.r.t. Conversion for Term Rewriting Systems</i> Takahito Aoto and Yoshihito Toyama
12:00–13:00	Lunch ( <b>Hatchcroft Foyer</b> )