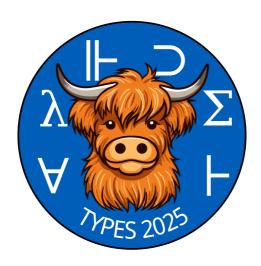
# 31<sup>st</sup> International Conference on Types for Proofs and Programs

# **TYPES 2025**



University of Strathclyde, Glasgow, Scotland, 9–13 June 2025











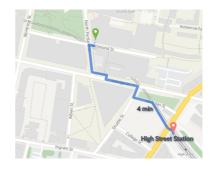
# Social events

# Monday 9 June: Welcome reception Livingstone Tower

The welcome reception will take place on level 11 of Livingstone Tower with views over Glasgow. Livingstone Tower is located next to the conference venue.

# Wednesday 11 June: Excursion to Loch Lomond

Wednesday afternoon we will go on a boat trip on Loch Lomond. To get there, we will take trains from the nearby *High Street* station to the village of Balloch. We will go in two groups: one leaving at 14:39, and one leaving at 15:09. Check the back of your name badge to see which group you have been assigned.



# Thursday 12 June: Conference dinner Grosvenor Cafe

The conference dinner will take place in the Grosvenor Cafe (pronounciation: grow-when-er, /ˈgɹəʊ.və.nə(ɪ)/) in Ashton Lane in the West End of Glasgow. A convenient way to get there is to take the subway from  $Buchanan\ Street$  to Hillhead— either the inner or outer circle works (but inner will be quicker). The dinner will start at 19:30.



# MSP's Guide to Glasgow

# Sights, Museums and Parks

In particular we recommend a walk through the Necropolis followed by a visit to the Cathedral.

- The Necropolis. Glasgow's City of the Dead is close to the conference venue, and offers nice views of the city.
- Glasgow Cathedral. Medieval; the oldest building in Glasgow.
- St Mungo Museum of Religious Life and Art. Close to the Cathedral and Necropolis.
- Glasgow Green. Large green space by the river Clyde.
- Kelvingrove Art Museum (Kelvingrove Park). Art/natural history/natural/history museum, well worth a visit. Has a Dalí painting, and is located in a nice park.
- University of Glasgow and the Hunterian Gallery. The other university in Glasgow has a nice campus, and the oldest museum in Scotland.
- Glasgow Botanic Gardens.
- The Burrell Collection (Pollok Park). A varied collection of art and history. Is located in a nice park, including highland cattle.
- $\bullet$  Queen's Park. Nice view of Glasgow from the flag pole.
- Gallery of Modern Art.
- The Riverside Museum. Award-winning transport and technology museum.
- Glasgow Science Centre.
- The Clydeside Distillery. The closest whisky distillery.
- The Tenement House. Discover what life was like in Glasgow 100 years ago.
- Sharmanka Kinetic Theatre. A unique experience.
- Glasgow mural trail. Nice walk in the city centre.

	19:00-20:00		18:00-19:00		17:00-18:00			16:00-17:00			15:00-16:00		14:00-15:00			13:00-14:00		12:00-13:00				11:00-12:00		10:00-11:00				9:00-10:00	8:30-9:00		Time (BST)		
		Welcome reception  throughout Bown, look 11		AdapTT: A Type Theory with Functorial Types Action (deal, Talant Bayeria, Mean Lamon Return Lingui Melled	Roalitability Trippers from Shaves Frence de Rode Films, House Raill	Left type theory  Com Myter	Irregular models of type theory  An alcebraic internal groupoidal model of Martin-	Broak	A Type I theory for Comprehension Categories with Applications to Subtyping Veyonia Applications of White Insolit decide there, They limited Notes		Synthetic-Inductive Category Theory  And Massers	Dependent two-sided fibrations for directed type theory  Jimmed Chi, Page Residet Medi	Coffee break	Rational Codata as Syntax-with-Binding <sub>dean Western</sub>	Categorical Normalization by Evaluation: A Novel Universal Property for Syntax Inset C. Serry, Manual June	Thinning Thinnings: Safe and Efficient Binders  April Grapoles, Workelde	Presheaves on Purpose	Expected in a Concerne with Expecte Substitute from a format dender date. Maio Forsib		amoh	Libb's Theorem and Procability Predicates in Roog	Geometric Reasoning in Lean: from Algebraic Structures to Presheaves Venny In. Kent Medical	Mechanicing logical relations	Coq proof of the fifth Busy Beaver value From Aries, de Middleye Chiareston	A Coq Formalization of Lagois Connections for Scene Information Flow Coupe 886 A ton Good State, Lord Robby Name, Davey Reptol Federa	Coffee break	Examples and counter-examples of injective types in univolent mathematics from the local form the lands.	In Carrior Space, No One Can Hear You Stream  Herte Ballen, Anna Malborit, Farra Marcie Pilost	Accessible Sets in Martin-Lôf Type Theory with Function Extensionality	Towards topological type theory for decrypting transfinite methods in classical mathematics has been been account.	ROJETANON AND CORRE	D. C.	Monday 9 <sup>th</sup> June
					Discussion on gender balance issues			Break	without Chân Memory Removal Ledence	Type Theory of Acyclic and Cyclic Algorithms	Reasoning with strict symmetric monddal categories in Agda  television denomina		Coffee break	Ecumenical logic		WEPN Opening and Welcome	Constructive algebraic completeness of first-order bi-intuitionistic logic Dennit Kee, Lee Solito	Type Theory and Philosophical Legic tray hear		lanch	Rock Completions For (Blumeritary) Topoi Kota Federic, Net on als Final	Yet another homotopy group, yet another Brunerie number Brunerie number	pe the	Predicative Stone Duality in Univalent Founda- tions  determined	About the construction of simplicial and cubical sets in induced form Any Metals, Instance Journals	Coffee break	From parametrosy to somity types Thoma district, Anton Sepai	phism Adan Kasair	Constraints  None Dis. Jeleva Resets Meritan desses, Vecha Pataron, The Historical Control of the Control of the Control of the Case for Improving active Universe Polymor-	Angaran Andrea Marian Malanda Marian Malanda Marian Malanda Marandericity via Lifting Universals to hard flowy Extending Seet Polymorphism with Elimination		C-a-	Tuesday 10 <sup>th</sup> June
									Balock Joek koncod	Recupion							Clody Roses	Towards a computational quantum logic  Accome Dan-Gree  Internal Proofs of Strong Normalization		lameh	Matching (Co)patterns with Cyclic Proofs List discontant, famili Otton	Tawards Quotient Inductive Types in Observa- tional Type Theory  Theory Research Vector February	Weak Equality Reflection in MITT with Proposi- tional Truncation		How (not) to prove typed type conversion transi- tive box Long	Coffee break		Monadic Equational Bossoning for while loop in Rocq.  Rocq Kenderel deeper Gariger, Subject Science, Styatel ASSAIL	Higher-Order Focusing on Linearity and Effects	Intuitionistic modaliifus through proof theory	Collec	C-B-	Wednesday 11 <sup>th</sup> June
Conference Din new	!				Business Morting			inquisitive logic logic particular protection  V. Send Alexander 1111  V. Send Alexander 1111	A Generalized Logical Pramework  Assess Knotes Assess Assess Assess for the interdisconductor  A Curry House of company and the a feet interdisconductor	An existential-aree theory of arrangests in all n- nife types Make Dynes	Canonical Bidirectional Typing via Polarised System L.	Coffee break	Mechanizard safety of Jolteon consumers in Agda On at 14 distant. More Audid-E. Amos Gapman	Rair Termination for Resource-Aware Active Objects  Pennino Deprina Pauli Oseveni Vide & EPus, Visus Breille	Formalising Monitors for Distributed Deadlock Detection  Industrian for Exects Advan Pressions, At out foots	orem Provers Coq/Rooq and Agda  More Branch, Autora Laurence, Mortin Seasonbraye, Anton Season	A among remnant amportations organic organic cal- cal in  have been decided for doubt theorethis  Verlying Zt BIIP Proofs with the Interactive The-		Tameh	A Two-level Romdation for the Calculus of Con- structions rose Assoc	Implementing a Typechecker for an Esoteric Language: Experiences, Challenges, and Lessons	Towards Being Positively Negative about Dependent Types  and Major & Major & Major	tion via Meta-program ped Proof Assistants	Type-safe Bidirectional Channels in Idris 2	Coffee break	Towards Modular Composition of Inductive Types Using Lean Meta-programming	Choice principles and a cotopological modality in $_{\rm domMGer}$	Compositional memory management in the $\lambda$ -calculus for Findam desired Matter	A Guided Tour of Polarity and Becusing	Collect	C-B-	Thursday 12 <sup>th</sup> June	
				Lightweight Agek Formalization of Denotational Semantics New Julius	Extensional concepts in intensional type theory, revisited Men, to, Neurolet Kepelin	Towards Formalising the Guard Checker of Rooq	Cohomology in Synthetic Stone Duality  Map Monolog, Theory Organd Ride Chroties Insid Gardys	Break	Solving Guarded Domain Equations in Pessheaves Over Ordinals and Mechanizing It	Lear-Learn Mechanizing the Metathrory of Lean	Representing type theories in two-level type the- ory.  Model Kraus Tore de Jone	H5TTLean: Formalizing the Meta-Theory of H5TT in Lean Loop has free charge, here Carmon, don Marston, 169 and Assential Species Foreign.	Coffee break	Large Elimination and Indexed Types in Refinement Types About Forents, Mile bloos	Containers: Compositionality for Tensors  Mit Olan, Pare Aperiot, Aspen Selection	Welhrauch Problèms as Containers an Price, Octio Proble	An Industrie Universe for Setoids	Steller - A Library for API Programming		laveh	A Quantitative Dependent Type Theory with Re- CHESON No. Anter Dependent, Autor Mr.	Unboxed Dependent Types  Ameliories Floridors	NbE for LNL via Adjoint Meta-modalities	Impredientive Encodings of Inductive and Coinductive Types due tive Types Abreas Courts, Selected of Hode, State Beneald	Linear Types inside Dependent Type Theory Marsdon Doc	Coffee break	Efficient Program Extraction in Elementary Number Theory using the Proof Assistant Minlog Beauties Henric	A Pully Dependent Assembly Language Many Assey, Assey, Assey Maley	A Ghost Sort for Proof-Relevant yet Erased Data in Bocq and MetaBocq Johnn Rosen Methon Soom, 766 West-teller	A constructive higher groupoid model of homo- topy type theory commonsis	Conne	Ca	Friday 13 <sup>th</sup> June

# MSP's Guide to Glasgow, continued

## Food

Some of our favourites.

#### City Centre

- Paesano Pizza, £
- Sugo Pasta, £
- Merchant Chippy, £
- Shawarma King, £
- Eda, ££
- Bread Meats Bread, ££
- Damasqino, ££
- The Dhabba, ££
- Cafe Gandolfi, ££
- Mosob, ££
- Yiamas Greek, ££
- Dim Sum, ££
- Swadish, ££
- Sarti's, ££

#### West End

- Ottoman Coffee House, £
- The Finnieston, £££
- Mother India, ££
- Ox and Finch, ££
- The Dockyard Social, £
- Roastit Bubbly Jocks, ££
- Time Out Cafe, £
- Zique's, ££
- Ubiquitous Chip, £££
- Ashoka, ££
- Bothy, ££

- Hanoi Bike Shop, ££
- Ka Pao, ££
- Stravaigin, ££

#### East End

- Celentanos, ££
- Sword Sushi, £
- Tibo Bistro, ££
- Dennistoun Bar-B-Que, ££
- WEST Brewery, ££
- The Drygate, ££

#### South Side

- Bar Vini, ££
- The Big Counter, ££
- Ranjit's Kitchen, £
- Kebabish, ££
- Little Hoi An, ££
- Lobo, ££
- The Glad Cafe, ££
- The Rum Shack, ££

## Vegan Specialists

- Mono, ££
- Stereo, ££
- Tapa, £
- Non Viet Vegan, ££
- Suissi Vegan Kitchen, ££
- The Hug and Pint, ££

### Pubs and bars

A curated list of MSP favourites, many alternatives are available.

### City Centre

- The Pot Still, ££ Best pub in Glasgow for Whiskey.
- Babbity Bowster, ££ Live traditional music by regulars on Wednesdays.
- The Press Bar, £
- The Scotia Bar, £ Allegedly the oldest pub in Glasgow.
- The Clutha, £
- The Howlin' Wolf, ££
- The Old Hairdresser's, £
- The Griffin, £

### West End

- Bon Accord, £
- Chinaskis, ££
- Lebowskis, £
- $\bullet\,$  The Sparkle Horse, ££
- Curlers Rest, £
- Inn Deep, ££
- The Belle, £

### East End

- Redmond's, ££
- The Palais, ££
- The Gate, ££
- WEST, ££

### Southside

- The Rose Reilly, £
- The Bell Jar, ££
- The Allison Arms, £
- Church on the Hill, ££

#### Live Music

- Nice N Sleazy
- The Hug and Pint
- Mono
- Stereo
- King Tut's Wah Wah Hut
- Ivory Blacks
- St Luke's and the Winged Ox