

# THE PERIPATETIC SEMINAR ON SHEAVES AND LOGIC

## First meeting: Oxford, 1–2 May 1976

### Friday

14.00: Gonzalo Reyes (Montréal), ‘Coherent logic’

16.00: Roy Dyckhoff (St Andrews), ‘Sheaves and bundles’

### Saturday

09.00: Robert Seely (Cambridge), ‘Hyperdoctrines and proof theory’

10.00: Wilfrid Hodges (Bedford College), ‘Uniform reduction for local functors’

11.00: Harold Simmons (Aberdeen), ‘ $j$ -maps on Heyting algebras’

11.45: Mike Fourman (Oxford), ‘Sober spaces in topoi’

14.15: Martin Hyland (Oxford), ‘Postprandial discursion’

15.15: Peter Johnstone (Cambridge), ‘Some short theorems on Kuratowski-finiteness’

16.45: Robin Grayson (Oxford), ‘Finiteness in intuitionistic set theory’

### Sunday

09.30: Gavin Wraith (Sussex), ‘Etale spectrum as a classifying topos’

10.30: Julian Cole (Sussex), ‘The bicategory of topoi’

11.45: Gonzalo Reyes (Montréal), ‘Negations of coherent formulae’

## Second meeting: Sussex, 22–23 May 1976

### Saturday

10.00: Dana Scott (Oxford), ‘Apartness relations’

11.30: Peter Johnstone (Cambridge), ‘Integral domains in toposes’

14.15: Mike Fourman (Oxford), ‘?’

15.30: Richard Bithell (Sussex), ‘Torsors’

16.30: Hassan Al-Ezeh (Sussex), ‘Etendues and glueing’

### Sunday

10.00: Gavin Wraith (Sussex), ‘Rings of Taylor type’

11.30: Bob Walters (Sydney), ‘Cosmoi and the logic of 2-categories’

## Third meeting: Cambridge, 12-13 June 1976

### Saturday

10.00: Mike Fourman (Oxford), ‘Complex analysis in a topos’

11.30: Barry Tennison (Cambridge), ‘Some sites used in algebraic geometry’

14.15: Robert Seely (Cambridge), ‘Theories definable by finite limits’

15.15: Julian Cole (Sussex), ‘Large and small sites’

16.30: Robin Grayson (Oxford), ‘Lindenbaum algebras of geometric theories’

### Sunday

10.00: Peter Johnstone (Cambridge), ‘Higher-dimensional torsors’

## Fourth meeting: Oxford, 30–31 October 1976

### Saturday

10.00: Chris Mulvey (Sussex), ‘A survey of sheaf representations’

14.30: Robin Grayson (Oxford), ‘Topology in topoi of sheaves’

16.00: Bill Stephenson (Bedford College), ‘Pierce representation of non-commutative rings’

### Sunday

09.30: Gavin Wraith (Sussex), ‘Formal differential geometry’

11.00: Michel Coste (Paris-Nord), ‘Spectra and sheaf representations’

12.00: Peter Johnstone (Cambridge), ‘Do free functors preserve monomorphisms?’

## Fifth meeting: Cambridge, 22–23 January 1977

### Friday

16.30: Robert Seely (Cambridge), ‘Exact functors and measurable cardinals’

### Saturday

10.00: Martin Hyland (Cambridge), ‘Elementary constructive analysis’

11.30: Peter Johnstone (Cambridge), ‘On a topological topos’

14.00: Chris Mulvey (Sussex), ‘Banach spaces I’

15.00: Gavin Wraith (Sussex), ‘Local equivalence of toposes’

16.30: Charles Burden (Sussex), ‘Banach spaces II’

### Sunday

10.00: Martin Hyland (Cambridge), ‘Continuity in spatial topoi’

11.30: Jean-Roger Roisin (Louvain), ‘A categorical approach to model theory’

## Sixth meeting: Sussex, 19–20 March 1977

### Friday

14.15: Dana Scott (Oxford), ‘The strange story of continuous lattices’

### Saturday

10.00: Robin Grayson (Oxford), ‘Well-orderings’

11.30: Jon Zangwill (Bristol), ‘Local set theory’

14.00: Peter Johnstone (Cambridge), ‘How to prove Barr’s theorem’

15.30: Jack Duskin (Buffalo), ‘Towards a non-abelian Kan–Dold–Puppe theorem’

### Sunday

10.00: Dana Scott (Oxford), ‘ $J$ -operators’

11.30: Chris Mulvey (Sussex), ‘The spectrum of a commutative  $C^*$ -algebra’

12.30: Richard Lewis (Sussex), ‘Sometimes additive functions’

## Seventh meeting: Lille, 4–5 June 1977

### Saturday

10.30: Rudolphe Bkouche (Lille), ‘Représentation des algèbres par faisceaux’

11.45: Mike Fourman (Clark), ‘Logique d’ordre supérieur dans un topos sans points’

15.00: Peter Johnstone (Cambridge), ‘A topos for topologists’

16.15: Michel Coste (Paris-Nord), ‘A negative result on lim-theories’

16.45: Sabah Fakir (Lille), ‘On differentially closed fields’

### Sunday

10.30: Yves Diers (Valenciennes), ‘Locally algebraic categories’

## Eighth meeting: Cambridge, 12–13 November 1977

### Friday

14.15: Anders Kock (Aarhus), ‘Formal differential geometry’

17.00: John Kennison (Clark), ‘Integral domain representation and related topics’

### Saturday

10.00: Rob Goldblatt (Wellington), ‘Grothendieck topology as geometric modality’

11.30: Michel Coste (Paris-Nord), ‘The classifying topos for algebraic extensions of a field’

14.15: Peter Johnstone (Cambridge), ‘De Morgan’s law and  $\mathbf{R}$ ’

15.15: Chris Mulvey (Sussex), ‘The prime stalk theorem’

16.45: Karl Hofmann (Tulane), ‘Continuous Heyting algebras’

### Sunday

10.00: Anders Kock (Aarhus), ‘Real-closed rings of line type’

11.30: Gavin Wraith (Sussex), ‘Relative cohomology of toposes’

12.30: Peter Johnstone (Cambridge), ‘When is  $\mathcal{E}_{kf}$  a topos?’

## Ninth meeting: Sussex, 11–12 March 1978

### Saturday

- 10.15: Peter Johnstone (Cambridge), ‘News from Puerto Rico’
- 11.45: Michel Coste (Paris-Nord), ‘Separably closed morphisms and separable closure’
- 14.00: Chris Mulvey (Sussex), ‘Gelfand duality’
- 15.00: Gavin Wraith (Sussex), ‘Completeness’
- 16.15: Marie-Françoise Coste (Paris-Nord), ‘Generic models of  $\epsilon$ -stable theories’

### Sunday

- 10.00: Jacques Parent (Paris-Nord), ‘Galois theory and spectra, I’
- 11.00: John Kennison (Clark), ‘Galois theory and spectra, II’

## Tenth meeting: Oxford, 27–28 May 1978

### Saturday

- 10.00: Pieter van Emde Boas (Amsterdam), ‘Connections between modal logic and algorithmic logic’
- 12.00: Mike Fourman (Columbia), ‘Joyal’s recent work on the real numbers’
- 14.30: Peter Johnstone (Cambridge), ‘The Gleason cover of a topos’
- 16.00: Chris Mulvey (Sussex), ‘Are there sheaves in the foundations of physics?’

### Sunday

- 10.00: Dana Scott (Oxford), ‘ $p$ -adic analysis in a topos’
- 11.15: Martin Hyland (Cambridge), ‘Completions of internal metric spaces’
- 12.00: Richard Josza (Oxford), ‘Sheaves and twistors’

## Eleventh meeting: Cambridge, 9–10 December 1978

### Saturday

- 10.00: Yves Diers (Valenciennes), ‘Topological spaces, ordered sets and spectra’
- 11.30: Marta Bunge (McGill), ‘Spectra and model companions’
- 14.00: John Bell (L.S.E.), ‘Isomorphism of structures in  $\mathcal{S}$ -toposes’
- 14.45: Michel Coste (Paris-Nord), ‘A coherent topos is spatial iff its category of points is equivalent to an ordered set’
- 15.45: Wilfrid Hodges (Bedford College), ‘Limit reduced products and a problem of Isbell’
- 16.30: Peter Johnstone (Cambridge), ‘Stone–Čech compactification in a topos, I’
- 17.15: Chris Mulvey (Sussex), ‘Stone–Čech compactification in a topos, II’

### Sunday

- 10.00: Marie-Françoise Coste (Paris-Nord), ‘The étale-real topos of an algebraic curve’
- 11.30: Gavin Wraith (Sussex), ‘Galois theory and generic automorphisms’
- 12.15: Mike Brockway (Oxford), ‘Relations between an  $\mathcal{S}$ -topos and sheaves over its truth-value algebra’

## Twelfth meeting: Oxford, 3–4 March 1979

### Saturday

- 10.45: Peter Johnstone (Cambridge), ‘Another factorization theorem for geometric morphisms’
- 12.00: John Haigh (Durham), ‘A connection between the Möbius algebra and the Grothendieck ring’
- 14.30: Wim Ruitenburg (Utrecht), ‘Intuitionistic Galois theory’
- 16.00: Gavin Wraith (Sussex), ‘The Galois group is a locale’
- 16.45: Sabine Koppelberg (Berlin), ‘A lattice of isomorphism types of Boolean algebras’

### Sunday

- 09.45: Richard Josza (Oxford), ‘Topos theory in physics’
- 10.45: Mike Brockway (Oxford), ‘When are hyperconnected morphisms logical?’
- 11.15: Gavin Wraith (Sussex), ‘Orderings of the field of rational functions’

## Thirteenth meeting: Sussex, 2–3 June 1979

### Friday

14.15: Ronnie Brown (Bangor), ‘Higher-dimensional group theory’

### Saturday

10.00: Peter Johnstone (Cambridge), ‘Open maps’

11.30: Ronnie Brown (Bangor), ‘Topologising spaces of partial maps with open domain’

14.00: Anders Kock (Aarhus), ‘Synthetic theory of differential forms’

15.00: Roswitha Harting (Düsseldorf), ‘Injective abelian groups in a topos’

16.30: Chris Mulvey (Sussex), ‘Stone–Čech compactification in a topos, III’

### Sunday

10.00: Jon Zangwill (Bristol), ‘Internal geometric theories’

11.15: Francis Borceux (Louvain), ‘Localisations of module categories’

12.00: Gavin Wraith (Sussex), ‘Freyd’s work on independence of (AC)’

## Fourteenth meeting: Cambridge, 17–18 November 1979

### Saturday

09.30: Peter Johnstone (Cambridge), ‘Recent progress in the theory of locales’

11.00: Marie-Françoise Coste-Roy (Paris-Nord), ‘The topos-theoretic approach to real algebraic geometry’

12.00: Michel Coste (Paris-Nord), ‘The real-étale spectrum is spatial’

14.15: Chris Mulvey (Sussex), ‘Propositional theories and spectra’

15.15: Jacques Penon (Paris VII), ‘Caractérisation des catégories fibrées et des champs’

16.15: Peter Vámos (Sheffield), ‘Axiomatizability of certain classes of modules’

16.45: John Bell (L.S.E.), ‘The category of subobjects of constant objects in a topos’

17.15: Mike Fourman (Columbia), ‘Applications of sheaves to logic’

### Sunday

09.30: Rudolphe Bkouche (Lille), ‘Galois extension in differential algebra’

11.00: Wim Ruitenburg (Utrecht), ‘Is linear algebra simple?’

11.45: Andy Pitts (Cambridge), ‘Some examples of triposes’

14.00: Henry Thomsen (Aarhus), ‘Joyal’s proof of the completeness theorem’

14.45: Dirk van Dalen (Utrecht), ‘An overlooked semantics and its uses’

15.15: Yves Diers (Valenciennes), ‘A construction of universal sheaves’

## Fifteenth meeting: Paris, 8–9 March 1980

### Saturday

09.15: Marie-Françoise Coste-Roy (Paris-Nord), ‘Ensembles semi-algébriques et topologie constructible réelle’

09.50: Axel Möbus (Düsseldorf), ‘Locally compact relational algebras’

10.45: Jean Bénabou (Paris-Nord), ‘Qu’est-ce qu’un sous-ensemble?’

11.30: Michel Carral (Toulouse), ‘Modules projectifs sur les anneaux de fonctions continues et les anneaux noethériens’

14.20: Barbara Veit (Roma), ‘Formes différentielles en géométrie différentielle synthétique’

14.55: Anders Kock (Aarhus), ‘Formal manifolds and jet categories’

15.45: Gavin Wraith (Sussex), ‘Remarques sur le topos de Dubuc et la cohomologie de de Rham’

16.30: Thierry Lucas (Louvain), ‘Le forcing en théorie des ensembles’

17.20: Peter Aczel (Manchester), ‘Some questions from an outsider’

### Sunday

09.30: Chris Mulvey (Sussex), ‘Le théorème de Gelfand-Naimark non commutative’

10.05: René Guitart (Paris VII), ‘La définition de  $\mathbf{N}$ ’

11.00: Dana Scott (Oxford), ‘Lambda-calculus and topoi’

11.35: Dominique Bourn (Amiens), ‘Une autre propriété universelle du champ associé’

14.30: Peter Johnstone (Cambridge), ‘All topoi are localic (d’après P. Freyd)’

15.15: Mike Fourman (Columbia), ‘Le théorème de descente de Joyal et Tierney’

## Sixteenth meeting: Oxford, 17–18 May 1980

### Friday

14.30: André Joyal (UQAM), ‘Arithmetic universes and recursive functions’

### Saturday

09.00: Wim Ruitenburg (Utrecht), ‘Necessity operators instead of  $J$ -operators’

09.30: Peter Aczel (Manchester), ‘On interpreting higher-order intuitionistic logic’

10.15: Martin Hyland (Cambridge), ‘The recursive realizability topos’

11.15: Dana Scott (Oxford), ‘Cartesian closed semigroups’

11.45: André Joyal (UQAM), ‘Partial recursive functions made into a cartesian closed category’

14.30: Mike Fourman (Columbia), ‘What is geometric logic?’

15.00: Peter Johnstone (Cambridge), ‘When is a topos localic over a Boolean topos?’

16.00: Harold Simmons (Aberdeen), ‘Cantor–Bendixson analysis in frame theory’

16.30: Giuseppe Rosolini (Oxford), ‘Reduced frame extensions’

### Sunday

09.30: Michel Coste (Paris-Nord), ‘Real dimension and cohomological dimension of the real spectrum’

10.00: Roswitha Harting (Düsseldorf), ‘Injective abelian group objects in certain topoi’

11.00: Jacques Penon (Paris VII), ‘Aspecte intuitionniste de la géométrie différentielle’

11.30: Gavin Wraith (Sussex), ‘Power series transformations’

## Seventeenth meeting: Sussex, 1–2 November 1980

### Saturday

10.00: Peter Freyd (Pennsylvania), ‘Theory of definite implication’

11.30: Anders Kock (Aarhus), ‘A general algebra/geometry duality in synthetic scheme theory’

14.15: Joachim Lambek (McGill), ‘Are toposes monadic over graphs?’

15.00: Peter Johnstone (Cambridge), ‘Vietoris locales’

16.15: Marie-Françoise Coste-Roy (Paris-Nord), ‘Nash functions and the real étale topos’

17.00: Gavin Wraith (Sussex), ‘Locales and existential doctrines’

### Sunday

10.00: Steve Comer (Charleston), ‘Sheaf duality of algebraic logic’

10.45: Giuseppe Rosolini (Oxford), ‘The Yoneda embedding and categories of sheaves’

11.45: Robin Cockett (Leeds), ‘Implosions, explosions and injective hulls’

## Eighteenth meeting: Cambridge, 28 February–1 March 1981

### Friday

17.00: Joachim Lambek (McGill), ‘Heraclitus and modern mathematics’

### Saturday

10.00: Peter Freyd (Pennsylvania), ‘Numerology’

11.45: Francis Borceux (Louvain), ‘Characterising a frame by its sheaves of algebras’

12.10: Gavin Wraith (Sussex), ‘Gorenstein–Weil algebras’

14.10: Harold Simmons (Aberdeen), ‘What should  $\text{spec } R$  be?’

14.45: Steve Comer (Charleston), ‘Applications of sheaf representations’

15.25: Wim Ruitenburg (Utrecht), ‘Primality’

16.30: Andy Pitts (Cambridge), ‘The effective monad’

17.10: Bill Lawvere (Buffalo), ‘Bornology’

### Sunday

09.40: Joachim Lambek (McGill), ‘Sheaf representations of toposes’

10.30: Dona Strauss (Hull), ‘Lattices of subobjects and quotients’

11.30: Murray Adelman (Macquarie), ‘The Chinese Remainder topos’

12.05: Yves Diers (Valenciennes), ‘On Chinese remainder theorems’

12.40: Helmut Wehrpals (Düsseldorf), ‘Commuting limits with colimits in a topos’

## Nineteenth meeting: Paris, 23–24 May 1981

### Saturday

- 09.30: Joachim Lambek (McGill), ‘Complétude et faisceaux’  
10.00: Jean Bénabou (Paris-Nord), ‘Catégories de fractions et logique’  
11.15: Christophe Houzel (Paris-Nord), ‘Catégories et linguistique’  
11.45: Peter Freyd (Pennsylvania), ‘The spectrum of a topos’  
14.15: Max Kelly (Sydney), ‘Generic models of enriched theories’  
14.55: Jean-Yves Girard (C.N.R.S.), ‘Introduction à la logique  $\Pi_2^1$ ’  
15.30: Michel Coste (C.N.R.S.), ‘L’idempotence du spectre réel’  
16.15: René Guitart (Paris VII), ‘Les esquisses (révisitées)’  
17.00: Chris Mulvey (Sussex), ‘Dualité de Guelfand dans un topos’  
17.40: Francis Borceux (Louvain), ‘Sur les anneaux de fonctions continues’

### Sunday

- 09.30: Yves Diers (Valenciennes), ‘Foncteurs cogénérateurs et représentation par faisceaux’  
10.00: Peter Johnstone (Cambridge), ‘Exponentiable toposes’  
11.25: Murray Adelman (Macquarie), ‘Logical functors between locally connected toposes’  
11.40: Axel Möbus (Düsseldorf), ‘Conditions weaker than (SG)’  
11.55: Jean-Luc Moens (Louvain), ‘Langage fonctoriel interne et théorème de Giraud dans un topos élémentaire’  
15.10: Jacques Penon (Paris VII), ‘Topologie et intuitionnisme’  
15.40: Greg Brumfiel (Stanford), ‘?’  
16.10: Michael Makkai (McGill), ‘Lifting the Stone duality from propositional logic to predicate logic’

## Twentieth meeting: Sussex, 7–8 November 1981

### Saturday

- 10.45: Ieke Moerdijk (Amsterdam), ‘Sheaf models for choice sequences’  
11.45: Gavin Wraith (Sussex), ‘Eilenberg–Mac Lane toposes and their cohomology’  
14.00: Francis Borceux (Louvain), ‘How to retrieve  $X$  from  $\text{Sh}(X, \mathbf{T})$ ’  
15.15: Harold Simmons (Aberdeen), ‘Application of Borceux’ work to modules’  
16.30: Peter Johnstone (Cambridge), ‘Compact sublocales of arbitrary locales’

### Sunday

- 10.15: Andy Pitts (Cambridge), ‘From Heyting algebra to topos (again)’  
11.15: Jiří Rosický (Brno), ‘Categories of sets and classes’

## Twenty-first meeting: Cambridge, 6–7 March 1982

### Saturday

- 10.00: Wim Ruitenburg (Utrecht), ‘Fields for primes’  
11.30: Dona Strauss (Hull), ‘Separation axioms for frames’  
14.00: Martin Hyland (Cambridge), ‘Points about products’  
15.45: Harold Simmons (Aberdeen), ‘?’

### Sunday

- 10.15: Chris Mulvey (Sussex), ‘Non-commutative topology (?)’  
11.45: Wim Ruitenburg (Utrecht), ‘Orders of propositional operators’  
12.15: Giuseppe Rosolini (Parma), ‘Pullbacks of locales’

## Twenty-second meeting: Louvain-la-Neuve, 22–23 May 1982

### Saturday

- 09.45: Peter Johnstone (Cambridge), ‘Open locales and exponentiation’  
11.15: Albert Burroni (Paris VII), ‘Algèbres graphiques’  
14.30: Jean-Luc Moens (Louvain), ‘Fibrations géométriques et théorème de Giraud’

- 15.20: Jacques Penon (Paris VII), ‘Théorème d’inversion locale en géométrie algébrique’
- 16.40: René Guitart (Paris VII), ‘Satellites’

**Sunday**

- 10.10: René Lavendhomme (Louvain), ‘Le théorème de Feferman–Vaught’
- 11.10: Mambu Mawanda (Louvain), ‘Axiome de choix et finitude’
- 12.10: Edmund Robinson (Cambridge), ‘Recovering the Zariski spectrum from the étale spectrum’

**Twenty-third meeting: Cambridge, 13–14 November 1982**

**Saturday**

- 10.00: Anders Kock (Aarhus), ‘On 1-form classifiers’
- 11.00: John Conway (Cambridge), ‘Universal fraction games’
- 12.00: Francis Borceux (Louvain), ‘Some locales of localizations’
- 14.30: Andy Pitts (Cambridge), ‘The interpolation property in categorical logic’
- 16.00: Gonzalo Reyes (Montréal), ‘Intuitionistic principles in smooth toposes, I’
- 16.45: Ieke Moerdijk (Amsterdam), ‘Intuitionistic principles in smooth toposes, II’

**Sunday**

- 10.00: Peter Johnstone (Cambridge), ‘Why Kelley wasn’t sober’
- 11.00: Jonathan Hoskin (Oxford), ‘Brouwer’s theorem in toposes’
- 11.30: Edmund Robinson (Cambridge), ‘The  $p$ -adic spectrum’

**Twenty-fourth meeting: Amsterdam, 26–27 February 1983**

**Saturday**

- 10.05: Saunders Mac Lane (Chicago), ‘Internal categories and indexed categories’
- 10.40: Gonzalo Reyes (Montréal), ‘De Rham cohomology in models of synthetic differential geometry’
- 11.45: Ieke Moerdijk (Amsterdam), ‘On choice sequences determined by spreads’
- 12.30: Karl-Heinz Ulbrich (Hamburg), ‘Group extensions in a topos’
- 15.05: Yves Diers (Valenciennes), ‘Sheaves of simple algebras on locally Boolean spaces’
- 15.45: Chris Mulvey (Sussex), ‘L’histoire de  $\mathbf{R}$ ’
- 16.45: Albert Burroni (Paris VII), ‘Algèbres graphiques internes’
- 17.30: Jean Bénabou (Paris-Nord), ‘Fibred categories and the foundations of category theory’

**Sunday**

- 10.05: Peter Johnstone (Cambridge), ‘Open locales and exponentiation, II’
- 10.50: Anders Kock (Aarhus), ‘A synthetic characterization of reduced algebras’
- 11.45: Michael Richter (Aachen), ‘Topological formulas, infinitesimals and superinfinitesimals’
- 12.30: Peter Breuer (Cambridge), ‘Intuitionistic point-set topology’

**Twenty-fifth meeting: Sussex, 18–19 June 1983**

**Saturday**

- 10.15: John Gray (Urbana), ‘Intrinsic linear programming’
- 11.30: Yves Diers (Valenciennes), ‘Locally simple algebraic theories’
- 12.30: Peter Johnstone (Cambridge), ‘Monro’s counterexample and QLO’
- 15.10: Andy Pitts (Cambridge), ‘Connected + locally connected  $\Rightarrow$  path-connected (?)’
- 16.20: Dirk van Dalen (Utrecht), ‘An application of the intuitionistic completeness theorem to the glueing of analysis models’

**Sunday**

- 10.15: Chris Mulvey (Sussex), ‘Distributivity, commutativity and  $C^*$ -algebras’
- 11.45: Edmund Robinson (Cambridge), ‘Report on a talk by Lawvere’

## Twenty-sixth meeting: Cambridge, 29–30 October 1983

### Saturday

- 10.15: Peter Johnstone (Cambridge), ‘Varieties of frames (after Isbell)’
- 11.15: Paul Taylor (Cambridge), ‘Co-exponentiable distributive lattices’
- 14.15: Tim Porter (Bangor), ‘Homotopy coherence in simplicial categories’
- 15.00: Graham Ellis (Bangor), ‘ $\mathbf{Cat}^n$ -groups and multiple crossed products’
- 16.15: Martin Hyland (Cambridge), ‘Tiny objects and étale maps’

### Sunday

- 10.00: Roy Dyckhoff (St Andrews), ‘Cartesianness and partial products’
- 11.15: Jonathan Hoskin (Oxford), ‘Finite determinacy’
- 12.15: Ieke Moerdijk (Amsterdam), ‘Local  $C^\infty$ -rings’

## Twenty-seventh meeting: Paris, 3–4 March 1984

### Saturday

- 09.30: René Guitart (Paris VII), ‘Catégories de modèles’
- 10.05: Aurelio Carboni (Milano), ‘Cartesian bicategories’
- 11.00: Peter Johnstone (Cambridge), ‘A topos-theorist looks at dilators’
- 11.35: Ronnie Brown (Bangor), ‘Crossed complexes and chain complexes with operators’
- 14.15: Renato Betti (Milano), ‘On cocompleteness of enriched categories’
- 14.40: Martin Hyland (Cambridge), ‘More on tiny objects’
- 15.15: Jean Bénabou (Paris-Nord), ‘Trees and forests’
- 16.40: Yves Diers (Valenciennes), ‘Sur la classification des catégories localement de présentation finie’
- 17.15: Ieke Moerdijk (Amsterdam), ‘Inverse limits of toposes’

### Sunday

- 09.35: Barbara Veit (Roma), ‘La convergence dans la sémantique catégorielle’
- 10.10: Thierry Lucas (Louvain), ‘Logiques modales’
- 11.10: Francis Borceux (Louvain), ‘Quantales and spectra’
- 11.50: Christophe Houzel (Paris-Nord), ‘Localisation analytique’
- 14.50: René Lavendhomme (Louvain), ‘Connexions en géométrie différentielle synthétique’
- 15.20: Chris Mulvey (Sussex), ‘Quantales and sheaves’
- 15.50: Jean Bénabou (Paris-Nord), ‘Ordinals and filtered colimits’

## Twenty-eighth meeting: Amsterdam, 16–17 June 1984

### Saturday

- 10.00: Gonzalo Reyes (Montréal), ‘Forcing smooth square roots and integration’
- 11.30: Yves Diers (Valenciennes), ‘Topological enrichment of essentially algebraic categories’
- 14.30: Ieke Moerdijk (Amsterdam), ‘Locally connected toposes’
- 16.00: Anders Kock (Aarhus), ‘On constructing functors between Lie groups’
- 17.00: Ngô van Que (Montréal), ‘Bäcklund transformations’

### Sunday

- 10.00: Gilberte van den Bossche (Louvain), ‘Quantales and quantic spaces’
- 11.30: Ieke Moerdijk (Amsterdam), ‘Connected, locally connected toposes are path-connected’

## Twenty-ninth meeting: Sussex, 3–4 November 1984

### Saturday

- 10.15: Peter Johnstone (Cambridge), ‘When is a variety a topos?’
- 11.30: Fer-Jan de Vries (Utrecht), ‘The associated sheaf functor and generalized negative translation’
- 12.15: Harold Simmons (Aberdeen), ‘Boolean reflections of frames’
- 14.15: Anders Kock (Aarhus), ‘Convenient vector spaces and the Cahiers topos’
- 15.20: Philip Higgins (Durham), ‘Tensor products and hom functors for  $\omega$ -groupoids and crossed complexes’



- 16.10: Ronnie Brown (Bangor), ‘Crossed squares and tensor products’  
17.10: Gavin Wraith (Sussex), ‘Homotopy of toposes: the unit interval re-enthroned’

**Sunday**

- 10.00: Chris Mulvey (Sussex), ‘The logic of quantal sets’  
11.30: Mohammed Nawaz (Sussex), ‘Localic groups’  
12.15: Francis Borceux (Louvain), ‘Sheaves on a quantale’

**Thirtieth meeting: Cambridge, 2–3 March 1985**

**Saturday**

- 10.00: Barry Mitchell (Rutgers), ‘Separable categories’  
11.45: Francis Borceux (Louvain), ‘Classical points of quantic spaces’  
14.30: Peter Johnstone (Cambridge), ‘Some elementary facts about Grothendieck topologies’  
15.15: Jon Chapman (Bristol), ‘Categories in a topos’  
16.30: Yves Diers (Valenciennes), ‘On the classification of categories of commutative algebras’

**Sunday**

- 10.00: Martin Hyland (Cambridge), ‘Recursive and effective toposes’  
11.15: Anders Kock (Aarhus), ‘Combinatorial notions of principal fibre bundles’  
12.00: Harold Simmons (Aberdeen), ‘Krull and Gabriel dimension’

**Thirty-first meeting: Rixensart, 1–2 June 1985**

**Saturday**

- 09.30: Jean Bénabou (Paris-Nord), ‘Some elementary facts about Grothendieck topologies’  
11.00: Murray Adelman (Macquarie), ‘Derived functors as a unary operation’  
11.30: Cristina Pedicchio (Trieste), ‘Boolean algebras in a localic topos’  
14.30: Adam Verschoren (Antwerp), ‘Sheaves in non-commutative algebraic geometry’  
15.15: Barbara Veit (Roma), ‘Classifying objects for algebraic categories’  
16.30: Barry Mitchell (Rutgers), ‘A little theorem about coherence’  
17.15: Dominique Bourn (Amiens), ‘Higher cohomology groups as classes of group actions’

**Sunday**

- 09.30: Eduardo Dubuc (Buenos Aires), ‘Open and étale maps’  
11.00: Chris Mulvey (Sussex), ‘Points of compact regular locales’  
11.45: Yves Diers (Valenciennes), ‘Disjoint pairs and disjunctors’

**Thirty-second meeting: Sussex, 7–8 December 1985**

**Saturday**

- 10.30: Gavin Wraith (Sussex), ‘Internal categories in internal categories in ...’  
11.30: Harold Simmons (Aberdeen), ‘Gabriel–Krull versus Cantor–Bendixson’  
14.15: Francis Borceux (Louvain), ‘Answering a question by Anders Kock’  
15.30: Andy Pitts (Sussex), ‘Typos theory?’  
16.30: Peter Aczel (Manchester), ‘Two final coalgebra theorems’

**Sunday**

- 10.15: Edmund Robinson (Cambridge), ‘Power domains’  
11.30: Tim Porter (Bangor), ‘Coherent ends—applications’

**Thirty-third meeting: Cambridge, 1–2 March 1986**

**Saturday**

- 10.15: Andy Pitts (Sussex), ‘Localoids’  
11.30: Yves Diers (Valenciennes), ‘Codisjunctors and singular epimorphisms in commutative algebra’  
14.00: Peter Johnstone (Cambridge), ‘Realcompact locales revisited (at last!)’  
14.45: Eugenio Moggi (Edinburgh), ‘Polymorphism and internal categories’

16.00: Martin Hyland (Cambridge), ‘Appendix to Moggi’s talk’  
16.30: Paul Taylor (Cambridge), ‘Categories with fixpoint properties’

**Sunday**

10.00: Francis Borceux (Louvain), ‘Some locales of nuclei’  
11.15: Fer-Jan de Vries (Utrecht), ‘Subalgebras as truth-values’

**Thirty-fourth meeting: Louvain-la-Neuve, 7–8 June 1986**

**Saturday**

09.45: Mike Fourman (Brunel), ‘Algebraic treatment of composition, hiding and restriction’  
11.00: Yves Diers (Valenciennes), ‘Codisjunctors in categories of ordered rings’  
11.45: Cristina Pedicchio (Trieste), ‘Primes in a localic topos’  
14.00: Peter Johnstone (Cambridge), ‘Further thoughts on the Cantor–Bernstein theorem’  
14.45: Pascal Dupont (Louvain), ‘Projectivity in a localic topos’  
15.30: Dominique Bourn (Amiens), ‘Shift functors for groupoids’  
16.30: Martin Hyland (Cambridge), ‘A question about ends’  
17.15: Paul Taylor (Cambridge), ‘The domain of domains’

**Sunday**

09.30: Anders Kock (Aarhus), ‘More on convenient vector spaces’  
10.45: John Power (Sydney), ‘Categories with structure’  
11.30: Robert Dawson (Cambridge), ‘What is revealed by a topless convexity’

**Thirty-fifth meeting: Sussex, 15–16 November 1986**

**Saturday**

10.15: Chris Mulvey (Sussex), ‘The maximality of filters’  
11.45: Gavin Wraith (Sussex), ‘Flow diagrams and functional languages’  
14.00: Andy Pitts (Sussex), ‘Cofaithful interpretations between geometric theories’  
15.00: Yves Diers (Valenciennes), ‘How many De Morgan laws are there?’  
16.30: Ieke Moerdijk (Amsterdam), ‘Prodiscrete groups’  
17.00: Harold Simmons (Aberdeen), ‘Discreteness for spaces and modules’

**Sunday**

10.15: Mambu Mawanda (Louvain), ‘Ensembles  $L$ -flous comme sous-ensembles généralisées’  
11.00: Giuseppe Rosolini (Parma), ‘Discrete and modest sets’  
11.30: Peter Johnstone (Cambridge), ‘Weak products of locales’

**Thirty-sixth meeting: Utrecht, 21–22 February 1987**

**Saturday**

10.15: Yves Diers (Valenciennes), ‘On flat morphisms’  
11.30: Susan Niefield (Union), ‘Constructing locales from quantales’  
12.30: Fer-Jan de Vries (Utrecht), ‘On topologies for algebraic theories’  
15.30: Harold Simmons (Aberdeen), ‘Compact ringed spaces without elements’  
16.45: Reinhard Börger (Hagen), ‘Disjoint coproducts’

**Sunday**

10.15: Francis Borceux (Louvain), ‘Prime and maximal filters’  
11.00: Japie Vermeulen (Louvain), ‘Tychonoff’s theorem without anything’  
12.15: Andy Pitts (Sussex), ‘On Girard’s qualitative semantics’

## Thirty-seventh meeting: Cambridge, 9–10 May 1987

### Saturday

- 10.00: Marta Bunge (McGill), ‘Mather’s stability theorem for infinitesimally represented germs’  
11.15: Yves Diers (Valenciennes), ‘Locally Hilbert categories’  
12.00: Andy Pitts (Sussex), ‘Algebraic toposes’  
14.15: Anders Kock (Aarhus), ‘A categorical theory of fibre bundles, with applications to locales’  
14.45: Rudolf Hoffmann (Bremen), ‘Completely distributive lattices’  
15.45: Duško Pavlović (Utrecht), ‘Categorical interpretation and a model for linear logic’  
16.30: Peter Johnstone (Cambridge), ‘Weakly (?) spatial locales’

### Sunday

- 10.00: Francis Borceux (Louvain), ‘Quantal sets via fibrations in topoi’  
11.30: Jean Bénabou (Paris-Nord), ‘Adding points and partial points’

## Thirty-eighth meeting: Trieste, 26–27 September 1987

### Saturday

- 09.35: Sammy Eilenberg (Columbia), ‘Rewrite systems’  
11.00: Martin Hyland (Cambridge), ‘Comonads, codescent objects and filtered inverse limits of toposes’  
11.35: René Lavendhomme (Louvain), ‘S4 théories variables’  
12.10: Siegfried Breitsprecher (Tübingen), ‘Logical foundations for classical probability’  
12.45: Aurelio Carboni (Milano), ‘Representable monads’  
14.45: Harold Simmons (Aberdeen), ‘Another look at the characterization of localizations of  $\mathbf{Mod}\text{-}R$ ’  
15.35: Barbara Veit (Roma), ‘Sheaves and localizations: a counterexample’  
16.20: Silvio Ghilardi (Milano), ‘Semantical analysis of first order distributive linear logic’  
17.00: L. Biondo (Milano), ‘Etale spaces and sheaves in a topos’  
17.35: Pascal Dupont (Louvain), ‘Internal injectivity for sheaves on a locale’  
18.10: Francis Borceux (Louvain), ‘Morita theory for Banach modules’

### Sunday

- 09.05: Jean Bénabou (Paris-Nord), ‘Arithmetic in a topos without NNO’  
09.50: Renato Betti (Milano), ‘Calculus of ends for enriched categories’  
10.50: Dominique Bourn (Amiens), ‘A right exactness property for internal  $n$ -categories’  
11.25: Giuseppe Rosolini (Parma), ‘Internal projectives in the effective topos and a universal property’  
12.00: Andy Pitts (Sussex), ‘Lex modules’

## Thirty-ninth meeting: Cambridge, 30–31 January 1988

### Saturday

- 10.00: Paul Taylor (Imperial), ‘The connected open filter monad—a connection between Scott and Berry–Girard domain theory’  
11.15: Andy Pitts (Sussex), ‘A (too) elementary theory of approximations’  
12.15: Dona Strauss (Hull), ‘The semigroup structure of  $\beta\mathbf{N}$ ’  
14.15: Yves Diers (Valenciennes), ‘Locally rational categories’  
15.05: Duško Pavlović (Utrecht), ‘Free Boolean categories’  
16.30: Nick Gilbert (Bangor), ‘Simplicial groups and automorphisms of crossed modules’  
17.15: Thomas Streicher (Passau), ‘Models of the calculus of constructions’

### Sunday

- 09.30: Ronnie Brown (Bangor), ‘Geometrically defined compositions and multiple processing’  
10.20: Bob Rosebrugh (Mount Allison), ‘Composing gamuts and automata’  
11.30: Harold Simmons (Aberdeen), ‘?’

## Fortieth meeting: Utrecht, 14–15 May 1988

### Friday

16.00: Martin Hyland (Cambridge), ‘Algebraic data types in models for the second order lambda-calculus’

### Saturday

10.10: Anders Kock (Aarhus), ‘A Godement theorem for locales’

11.20: Peter Johnstone (Cambridge), ‘A constructive proof that localic subgroups are closed’

14.50: Thomas Streicher (Passau), ‘Independence proofs by realizability models of the calculus of constructions’

15.20: Andre Scedrov (Pennsylvania), ‘Semantic parametricity in polymorphic lambda calculus’

16.35: Andy Pitts (Sussex), ‘The category of closed types of a consistent polymorphic  $\lambda$ -theory can never be a topos’

17.15: Yves Diers (Valenciennes), ‘Codisjunctors in the category of  $C^\infty$ -rings’

### Sunday

10.10: Francis Borceux (Louvain), ‘When is a locally finitely presentable category a topos?’

10.45: Jørn Schmidt (Aarhus), ‘Coherent theory of internal sites and their models’

11.45: Fer-Jan de Vries (Utrecht), ‘A type-theoretical perspective on the family of associated sheaf constructions’

12.15: Robert Paré (Dalhousie), ‘Natural numbers in monoidal categories’

## Forty-first meeting: Cambridge, 12–13 November 1988

### Friday

14.15: Ieke Moerdijk (Utrecht), ‘Groupoids and torsors’

### Saturday

10.10: Anders Kock (Aarhus), ‘Left exactness of Kan extensions with values in large sites’

11.15: Ieke Moerdijk (Utrecht), ‘Descent for toposes’

12.10: Dona Strauss (Hull), ‘A functor from frames to extremally disconnected spaces’

14.00: Andy Pitts (Sussex), ‘Powertypes and polytypes’

14.45: Gavin Wraith (Sussex), ‘Remarks on Hagino’s thesis: Categorical Datatypes’

15.45: Peter Johnstone (Cambridge), ‘The monadic factorization of a geometric morphism’

16.30: Paul Taylor (Imperial), ‘Universal properties, Galois groups and Girard’s domain theory’

### Sunday

10.00: Bruno Loiseau (Louvain), ‘Some properties of  $PN$  in a topos’

11.10: Duško Pavlović (Utrecht), ‘Some categorical structures around type theories’

11.55: Fer-Jan de Vries (Amsterdam), ‘Gödel translations’

## Forty-second meeting: Louvain-la-Neuve, 7–8 January 1989

(combined with René Lavendhomme 60th birthday meeting)

### Friday

17.30: Bruno Loiseau (Louvain), ‘Naturels, réels et lemme de Zorn dans les topos: quelques aspects logiques’

### Saturday

09.50: Felipe Gago (Santiago), ‘Singularities in synthetic differential geometry’

11.00: Yves Diers (Valenciennes), ‘Reduced rational Zariski categories’

11.55: Peter Johnstone (Cambridge), ‘Associative and commutative Mal’cev operations’

14.35: Valeria de Paiva (Cambridge), ‘A Dialectica-like model of linear logic’

15.15: Silvio Ghilardi (Milano), ‘Modal logics with  $n$ -ary connectives’

16.20: Francis Borceux (Louvain), ‘Quantaes étalés’

### Sunday

09.30: Max Kelly (Sydney), ‘The complete lattice of essential localizations’

11.00: Wesley Phoa (Cambridge), ‘Relative computability in the effective topos’

11.40: Mambu Mawanda (Louvain), ‘Quelques propriétés des catégories de sous-ensembles flous’

### Monday

- 09.30: Jack Duskin (Buffalo), ‘Theory of higher-dimensional descent’
- 11.00: Dominique Bourn (Amiens), ‘Coherent tensor products for abelian chain complexes’
- 12.00: Anders Kock (Aarhus), ‘A category of sites for constructing locales’
- 14.30: Nicolas Rouche (Louvain), ‘Présentation de la carrière de René Lavendhomme’
- 15.00: Sammy Eilenberg (Columbia), ‘Sur quelques points de topologie’
- 17.00: André Patsalides (Louvain), ‘Psychanalyse et mathématique’
- 18.00: Paul Vercauteren (Louvain), ‘Figures politiques et relations paradoxales’

### Tuesday

- 09.30: Gonzalo Reyes (Montréal), ‘Topos-theoretic approach to the logic of reference’
- 11.00: Chris Mulvey (Sussex), ‘Quantales’
- 12.00: Max Kelly (Sydney), ‘A characterization of those maps  $\mathbf{Rel}(\mathcal{E}) \rightarrow \mathbf{Rel}(\mathcal{F})$  which arise from functors  $\mathcal{E} \rightarrow \mathcal{F}$ ’
- 14.30: Jean Bénabou (Paris-Nord), ‘Prerequisites for a theory of 2-fibrations’
- 15.30: Yves Diers (Valenciennes), ‘Categories of algebraic varieties’
- 16.45: Alfred Frölicher (Genève), ‘New convenient function-space functors’
- 17.30: Jean Bénabou (Paris-Nord), ‘Categorical logic’

### Wednesday

- 09.30: Ieke Moerdijk (Utrecht), ‘Bisimplicial sets and the group completion theorem’
- 11.00: Peter Johnstone (Cambridge), ‘Constructive and non-constructive locale theory’
- 12.00: Harold Simmons (Aberdeen), ‘Idioms and dimension functions’
- 14.30: Walter Tholen (York), ‘Dualities’
- 15.15: Lieven Le Bruijn (Antwerpen), ‘Matrix tori problems’
- 16.30: Roland Puijstjens (Gent), ‘Generalized inverses’
- 17.15: Tim Porter (Bangor), ‘Crossed  $n$ -cubes’

## Forty-third meeting: Edinburgh, 13–14 May 1989

### Friday

- 14.00: Martin Hyland (Cambridge), ‘?’

### Saturday

- 09.30: Peter Johnstone (Cambridge), ‘The “Closed Subgroup Theorem” for localic herds and pregroupoids’
- 10.00: Harold Simmons (Aberdeen), ‘Logic for IT — a review’
- 11.00: Francis Borceux (Louvain), ‘Etale maps of quantales’
- 12.15: Simon Ambler (Edinburgh), ‘Quantales and linear doctrines’
- 14.00: Andy Pitts (Cambridge), ‘Adding recursion and induction to Moggi’s computational monads’
- 15.10: Doug Gurr (Edinburgh), ‘Complexity and monads’
- 16.10: Wesley Phoa (Cambridge), ‘Categorical foundations of effective domain theory’
- 17.00: Duško Pavlović (Utrecht), ‘Categorical structure of paradoxes’

### Sunday

- 10.00: David Rydeheard (Manchester), ‘Program development and indexed categories’
- 10.45: Rod Burstall (Edinburgh), ‘An algebraic theory of deliverables’
- 11.45: Andreas Knobel (Edinburgh), ‘A constructive fully abstract  $\lambda$ -model’
- 12.40: Martin Hyland (Cambridge), ‘The relevance of linear logic’

## Forty-fourth meeting: Santiago de Compostela, 28–29 September 1989

### Thursday

- 10.15: Tim Porter (Bangor), ‘The pursuit continues’
- 11.45: Peter Johnstone (Cambridge), ‘Fibrewise separation axioms for locales’
- 12.35: René Lavendhomme (Louvain), ‘Sur une notion générale de module croisé’
- 15.00: Cristina Pedicchio (Trieste), ‘Mal’cev categories’
- 15.40: Leovigildo Alonso Tarrío (Santiago), ‘Nordic schemes and complete intersection’
- 16.45: Francis Borceux (Louvain), ‘Two counterexamples for quasitopos theory’

17.25: Sandra Mantovani (Milano), ‘An elementary characterization of categories of separated objects for pretoposes and Abelian categories’

**Friday**

10.15: Ieke Moerdijk (Utrecht), ‘Classifying toposes and foliations’

11.45: Ronnie Brown (Bangor), ‘The holonomy groupoid of a topological piece of a groupoid’

12.40: Aurelio Carboni (Milano), ‘Familially representable functors’

15.00: René Guitart (Paris VII), ‘Split exact squares and torsion’

16.30: Albert Burroni (Paris VII), ‘Analyse dimensionnelle des problèmes de réécriture’

**Forty-fifth meeting: Cambridge, 24–25 March 1990**

**Thursday**

10.10: Marta Bunge (McGill), ‘Open covers and the fundamental localic groupoid of a topos’

11.10: Kirill Mackenzie (Sheffield), ‘Double groupoid structures arising in differential geometry’

12.00: Mark Lawson (Bangor), ‘Pseudogroups and ordered groupoids’

14.10: Mikhail Kapranov (Moskva), ‘Free  $n$ -category generated by  $n$ -cube and higher Bruhat orders’

15.00: Jiří Adámek (Praha), ‘Injectivity in locally presentable categories’

16.15: Ivan Ivanić (Zagreb), ‘Strong shape category of metric compacta is not usual homotopy category’

**Friday**

09.15: Anders Kock (Aarhus), ‘Relatively boolean toposes’

10.05: Chris Mulvey (Sussex), ‘Quantales and  $C^*$ -algebras’

11.10: Jiří Rosický (Brno), ‘Accessible functors and their images’

12.00: Yves Diers (Valenciennes), ‘Preneat, neat, purely unneat, neatly closed objects and morphisms’

14.10: Kh. Inassaridze (Tbilisi), ‘On nonabelian derived functors’

15.00: Hans-Jürgen Hoehnke (Berlin), ‘Structural properties of fractal categories’

16.15: Ronnie Brown (Bangor), ‘ $\omega$ -categories and  $\infty$ -categories’

**Saturday**

09.35: Giuseppe Rosolini (Parma), ‘Uniform families of maps are often dinatural’

10.10: Thomas Streicher (Passau), ‘A weak, but not strong, full sub-LCCC of  $\omega$ -Set’

11.10: Mikhail Tsalkenkov (Moskva), ‘Relational algebras with truth values in Heyting algebras’

12.00: Cristina Pedicchio (Trieste), ‘Equivalence relations and Mal’cev categories’

12.30: Aurelio Carboni (Milano), ‘Remarks on Mal’cev categories’

14.10: Vladimir Topencharov (Sofia), ‘On some category-like structures’

15.00: Ieke Moerdijk (Utrecht), ‘Crossed modules’

16.00: Edmund Robinson (Sussex), ‘PIE-limits’

16.35: Zhao Dongsheng (Cambridge), ‘Semicontinuous lattices’

**Sunday**

10.10: John Power (Edinburgh), ‘Enrichment over monoidal biclosed categories’

11.05: Barry Jay (Edinburgh), ‘Extending properties to categories of partial maps’

**Forty-sixth meeting: Edinburgh, 3–4 November 1990**

**Saturday**

09.45: Peter Johnstone (Cambridge), ‘Lindelöf locales and countable choice’

10.35: Simon Ambler (Edinburgh), ‘A linear view of equality’

11.50: Richard Steiner (Glasgow), ‘Nerves and tensor products of multiple categories’

13.40: Gianfranco Mascari (Roma), ‘Lazy computations and monads in 2-categories’

14.40: Barry Jay (Edinburgh), ‘Matrices, monads and the fast Fourier transform’

16.00: John Power (Edinburgh), ‘Pasting for  $n$ -categories’

**Sunday**

09.45: Giuseppe Rosolini (Parma), ‘A model for QUEST’

10.45: Paul Taylor (Imperial), ‘Synthetic domain theory’

11.50: James McKinna (Edinburgh), ‘A new model of the theory of constructions’

12.20: Doug Gurr (Edinburgh), ‘Far from the monading crowd’

## Forty-seventh meeting: Amsterdam, 16–17 March 1991

### Saturday

- 09.50: Andy Pitts (Cambridge), ‘All Heyting algebras are nice’  
11.00: Wim Veldman (Nijmegen), ‘Iets over de Ramsey-Stelling’  
11.30: Raymond Hoofman (Utrecht), ‘The theory of semi-functors and second-order linear logic’  
14.00: Ieke Moerdijk (Utrecht), ‘Diaconescu’s theorem for topologists’  
14.50: Jaap van Oosten (Amsterdam), ‘Lifschitz realizability as a subtopos of **Eff**’  
15.50: Duško Pavlović (Utrecht), ‘On the axiom of replacement’  
16.20: Thomas Streicher (Passau), ‘Strongly  $\Sigma$ -replete objects’

### Sunday

- 09.45: Barry Jay (Edinburgh), ‘Local adjunctions and long  $\beta\eta$ -normal forms’  
10.35: David Rydeheard (Manchester), ‘Type classes, comprehension schema and coherence’  
11.45: Panagis Karazeris (Aarhus), ‘Compact topologies on locally presentable categories’  
12.30: Anders Kock (Aarhus), ‘Quotients of decidable objects in a topos’

## Forty-eighth meeting: Edinburgh, 9–10 November 1991

### Saturday

- 09.30: Peter Johnstone (Cambridge), ‘**T**-bags’  
10.30: André Joyal (UQAM), ‘Some elementary coherence theorems’  
11.30: Barry Jay (Edinburgh), ‘An invariant definition of lists’  
12.00: Simon Ambler (Queen Mary), ‘Enriched categories in the semantics of evidential reasoning’  
14.00: Thomas Streicher (Passau), ‘Semantics of intensional type theory’  
14.30: Bart Jacobs (Cambridge), ‘Semantics of  $\lambda I$  and of other “substructure”  $\lambda$ -calculi’  
15.00: Paul Taylor (Imperial), ‘What is set-theoretic inclusion?’  
16.00: Ieke Moerdijk (Utrecht), ‘Locally localic toposes’  
16.30: Ronnie Brown/Osman Mucuk (Bangor), ‘Monodromy groupoids’

### Sunday

- 10.00: Wesley Phoa (Edinburgh), ‘Synthetic domain theory and PCF’  
10.30: Japie Vermeulen (Cape Town), ‘Towards a proper extension of the Galois theory of Joyal and Tierney’  
11.30: Alex Simpson (Edinburgh), ‘Modal type theory’  
12.00: Edmund Robinson (Sussex), ‘Functorial parametricity’  
12.30: John Power (Edinburgh), ‘Low-dimensional coherence’

## Forty-ninth meeting: Manchester, 22–23 February 1992

### Saturday

- 10.00: Anders Kock (Aarhus), ‘Monads for which structures are adjoint to units’  
11.15: Thomas Streicher (Passau), ‘Hyperdoctrines from modified realizability’  
11.45: Paul Taylor (Imperial), ‘Where does well-founded induction fit into category theory?’  
14.15: Peter Johnstone (Cambridge), ‘Fibrations and partial products in a 2-category’  
15.25: Peter Aczel/Gilles Barthe (Manchester), ‘Towards categorical models of constructive set theory’  
16.00: Richard Banach (Manchester), ‘Prefibrations and the Grothendieck preconstruction’  
17.00: Murray Adelman (Macquarie), ‘Sheaves and quantum logic’

### Sunday

- 10.00: François Lamarche (ENS), ‘Factorization systems and generalized toposes’  
11.20: Bart Jacobs (Cambridge), ‘In between intuitionistic logic and linear logic’  
12.05: Barry Jay (Edinburgh), ‘Tail recursion in a monoidal setting’

## Fiftieth meeting: Cambridge, 28–29 November 1992

### Saturday

- 09.30: Dana Scott (Linz), ‘Remarks on the history of the Peripatetic Seminar’  
09.50: Mark Lawson (Bangor), ‘An embedding of inverse semigroups’  
10.30: Cristina Pedicchio (Trieste), ‘Mal’cev algebras’  
11.30: Yves Diers (Valenciennes), ‘Direct codisjunctors’  
12.05: Ieke Moerdijk (Utrecht), ‘Augmented linear orders’  
12.35: Gavin Wraith (Sussex), ‘A topos-theoretic look at Steenrod operations’  
14.00: Steven Vickers (Imperial), ‘Topical categories of domains’  
14.45: Yves Lafont (LIENS), ‘Equational reasoning with 2-dimensional diagrams’  
16.00: Jiří Rosický (Brno), ‘Locally weakly presentable categories’  
16.30: John Longley (Edinburgh), ‘Functors between realizability toposes’  
17.00: Marcelo Fiore (Edinburgh), ‘Domain theory in CPO-enriched categories’

### Sunday

- 09.30: Anders Kock (Aarhus), ‘Relative De Morgan toposes’  
10.00: Max Kelly (Sydney), ‘A categorical look at operads’  
11.15: Dana Scott (Linz), ‘Geometry via algebra’  
12.10: Martin Hofmann (Edinburgh), ‘A relational model for the calculus of constructions’  
12.30: Thomas Streicher (München), ‘Two notions of modified realizability sets’

## Fifty-first meeting: Valenciennes, 13–14 February 1993

### Saturday

- 09.30: Jean Bénabou (Paris-Nord), ‘Foliated categories and “baseless fibrations”’  
10.45: Murray Adelman (Macquarie), ‘The free abelian category and some questions’  
11.20: Aurelio Carboni (Milano), ‘The freeness of algebraic categories’  
12.00: Martin Hyland (Cambridge), ‘What Wedderburn’s theorem means’  
14.15: Max Kelly (Sydney), ‘Ad conferenciam Martini Hylandi’  
14.55: Günther Richter (Bielefeld), ‘Priestley’s duality revisited’  
15.30: Pierre Dampousse (Tours), ‘Relever la dualité de Stone’  
16.15: Julia Garcia Cabello (Granada), ‘Closed model structures for algebraic models of  $n$ -types’  
17.15: Matthias Gerner (Paris VII), ‘Construction effective de diagrammes localement libres’  
17.45: Sjoerd Crans (Utrecht), ‘Quillen closed model structures for sheaves’  
18.15: Phil Ehlers (Bangor), ‘Algebraic homotopy in simplicially enriched groupoids’

### Sunday

- 09.30: Max Kelly (Sydney), ‘On Mal’tsev and Goursat categories’  
10.45: Dominique Bourn (Amiens), ‘The nerve functor for  $n$ -groupoids’  
11.25: René Guitart (Paris VII), ‘Enveloppe karoubienne de la catégorie des relations continues entre espaces compacts’

## Fifty-second meeting: Utrecht, 8–9 May 1993

### Friday

- 11.15 and 14.15: Andre Scedrov (Pennsylvania), ‘Linear logic and complexity theory’

### Saturday

- 09.45: Peter Johnstone (Cambridge), ‘When does Artin glueing yield a topos?’  
10.15: Dorette Pronk (Utrecht), ‘Etendues as a bicategory of fractions’  
11.15: Paul Taylor (Imperial), ‘Exactness properties in synthetic domain theory’  
11.45: Thomas Streicher (München), ‘A synthetic account of extensional PERs’  
14.15: Herman Geuvers (Nijmegen), ‘Conservativity of higher order propositional logic over second order propositional logic’  
14.45: Bart Jacobs (Utrecht), ‘Conventional and linear types in a logic of coalgebras’  
15.45: Anders Kock (Aarhus), ‘Generators and relations for  $\Delta$  as a monoidal 2-category’  
16.15: Andre Scedrov (Pennsylvania), ‘Glueing and relators’



### Sunday

- 09.30: Yves Diers (Valenciennes), ‘Clear objects in categories of commutative algebras’
- 10.00: Wim Ruitenburg (Marquette), ‘A propos’
- 11.00: Claudio Hermida (Edinburgh), ‘Kleisli fibrations and indeterminates’
- 11.30: Jaap van Oosten (Utrecht), ‘Axiomatizing higher order realizability’
- 12.00: Jürgen Koslowski (Hannover), ‘Modules and polarities’

## Fifty-third meeting: Trieste, 11–12 September 1993

### Saturday

- 10.00: Jean Bénabou (Paris-Nord), ‘More on foliated categories’
- 11.00: Dorette Pronk (Utrecht), ‘Algebraic stacks’
- 11.30: Matthias Gerner (Paris VII), ‘The geometry of sketches’
- 12.00: Ieke Moerdijk (Utrecht), ‘The equivariant Whitehead theorem’
- 14.30: Marco Grandis (Genova), ‘Enriched categories for homotopical and homological algebra’
- 15.00: Panagis Karazeris (Aarhus), ‘Gabriel topologies on quantales’
- 16.00: George Janelidze (Tbilisi), ‘What is a topological indexed category?’
- 16.30: Walter Tholen (York), ‘Further examples of descent’
- 17.15: Silvio Ghilardi (Milano), ‘Sheaf representation and duality for finitely presented Heyting algebras’
- 18.00: Albert Burroni (Paris VII), ‘ $n$ -catégories,  $n$ -langages et applications aux calculs parallèles’

### Sunday

- 09.40: Peter Johnstone (Cambridge), ‘Quotients of localic Mal’cev algebras’
- 10.10: Jacques Penon (Paris VII), ‘Un pont entre deux géométries différentielles’
- 10.45: Cristina Pedicchio (Trieste), ‘On left exact functors’
- 11.30: Vladimir Uspenskiĭ (Moskva), ‘On topological Mal’cev algebras’
- 12.00: Aurelio Carboni (Milano), ‘Small complete non-posetal categories (if any)’
- 12.30: Robert Paré (Dalhousie), ‘Paths in a category’

## Fifty-fourth meeting: Sussex, 26–27 March 1994

### Saturday

- 10.00: Anders Kock (Aarhus), ‘Local groupoids and étendues’
- 10.40: Yves Diers (Valenciennes), ‘Categories of affine sets’
- 11.30: David Murphy (Birmingham), ‘Process synchronisation as glueing’
- 12.00: Jaap van Oosten (Utrecht), ‘Extensional realizability’
- 12.30: Paul Taylor (Imperial), ‘The construction of the classifying category for a dependent type theory’
- 14.00: Ronnie Brown (Bangor), ‘Computing with 2-dimensional groups’
- 14.45: Winfried Dreckmann (Bangor), ‘On the cohomology of categories’
- 15.45: Harold Simmons (Manchester), ‘Program extraction via finalization’
- 16.30: Andrea Schalk (Darmstadt), ‘Algebras for generalized power constructions’
- 17.00: Simon Ambler (Leicester), ‘Generalized logic in the representation of non-commutative rings’

### Sunday

- 10.00: Peter Johnstone (Cambridge), ‘A new proof that subtoposes form a co-Heyting algebra’
- 10.30: Bart Jacobs (Utrecht), ‘Quotients in type theory’
- 11.30: Edmund Robinson (Sussex), ‘Parametricity à la Longo, Plotkin, and Scott’
- 12.00: Carolyn Brown (Sussex), ‘Categories, allegories and circuit design’
- 12.30: Ieke Moerdijk (Utrecht), ‘Holonomy’

## Fifty-fifth meeting: Edinburgh, 28–29 May 1994

### Saturday

- 09.30: Robin Milner (Edinburgh), ‘Control structures’  
10.30: Alex Mifsud (Edinburgh), ‘Labelled transition semantics for reflexive Pi-calculus’  
11.30: Claudio Hermida (Aarhus), ‘An algebraic view of induction’  
12.15: David Murphy (Birmingham), ‘Process synchronisation as glueing, II’  
14.30: Edmund Robinson (Sussex), ‘Pre-monoidal categories’  
15.15: Martin Hofmann (Edinburgh), ‘Interpretation of dependent type theory in locally cartesian closed categories’  
16.30: Elias David (London), ‘Scott and sober spaces’  
17.15: John Power (Edinburgh), ‘Gabriel–Ulmer duality for categories enriched over a bicategory’

### Sunday

- 09.30: Peter Johnstone (Cambridge), ‘The category of Heyting algebras is protomodular’  
10.00: Harold Simmons (Manchester), ‘The Smyth–Plotkin construction seen as an instance of glueing’  
10.30: Bart Jacobs (Utrecht), ‘Dependent types as sheaves of continuous lattices’  
11.30: Alex Simpson (Edinburgh), ‘Categorical completeness results for the simply-typed lambda-calculus’  
12.00: Neil Ghani (Edinburgh), ‘Adjoint rewriting’

## Fifty-sixth meeting: Aarhus, 3–4 December 1994

### Saturday

- 10.00: Chris Mulvey (Sussex), ‘Pure states’  
10.35: Till Plewe (Utrecht), ‘Absolutely Borel locales’  
11.40: Ieke Moerdijk (Utrecht), ‘“Makkai” ’  
12.15: Duško Pavlović (Imperial), ‘How couniversal is the Chu construction?’  
14.20: Peter Johnstone (Cambridge), ‘What can you do with a finitary sketch?’  
14.55: Vladimiro Sassone (Aarhus), ‘An approach to the category of Petri net computations’  
16.00: Thomas Streicher (München), ‘Partial left exact categories and partial toposes’  
16.35: Jaap van Oosten (Aarhus), ‘Fibrations and calculi of fractions’  
17.10: René Guitart (Paris VII), ‘On the definition of homology’

### Sunday

- 09.45: Anders Kock (Aarhus), ‘Some extensive quantities in locale theory’  
10.15: Sergei Soloviev (Aarhus), ‘Proof of a conjecture by S. Mac Lane’  
11.15: Pierre Damphousse (Tours), ‘On endofunctors of **Ens** fixing objects’  
11.45: Bart Jacobs (Amsterdam), ‘Mongruences and cofree coalgebras’  
12.20: Torben Brauner (Aarhus), ‘The Girard translation extended with recursion’

## Fifty-seventh meeting: Tours, 18–19 February 1995

### Saturday

- 09.30: Yves Diers (Valenciennes), ‘The generic functional algebra’  
10.20: Paul Taylor (Imperial), ‘Dependent types’  
14.00: Laurence Nison (Valenciennes), ‘La catégorie des variétés algébriques rationnelles’  
15.00: Chris Mulvey (Sussex), ‘The constructive Hahn–Banach Theorem’  
16.45: Richard Mijoule (Paris VII), ‘Fonctions partielles abstraites’

### Sunday

- 09.00: Jiří Rosický (Brno), ‘Geometric sketches’  
10.00: Pierre Damphousse (Tours), ‘La classification des cartes cellulaires’

## Fifty-eighth meeting: Genova, 13–14 May 1995

### Saturday

- 10.00: Peter Johnstone (Cambridge), ‘Quotient maps of locales (after Li Yongming)’
- 10.30: Jan Rutten (Amsterdam), ‘Elements of enriched metric domain theory’
- 11.35: Robert Paré (Dalhousie), ‘Dinatural numbers’
- 14.30: Steve Schanuel (Buffalo), ‘David and Goliath: tame categories of space’
- 15.30: Richard Mijoule (Paris VII), ‘Duality and partiality’
- 16.40: Claudio Hermida (Aarhus), ‘Mixed induction and coinduction in fibrations’
- 17.10: John Power (Edinburgh), ‘Tetracategories’

### Sunday

- 09.30: Bill Lawvere (Buffalo), ‘The algebra of time’
- 10.30: Silvio Ghilardi (Milano), ‘Model-completions in varieties arising from logic’
- 11.40: Bart Jacobs (Amsterdam), ‘Objects and classes, coalgebraically’
- 12.10: Eugenio Moggi (Genova), ‘Generalizing notions of computation as monads—the other way’

## Fifty-ninth meeting: Edinburgh, 7–8 October 1995

### Saturday

- 09.30: Phil Scott (Ottawa), ‘Linear Läuchli semantics and full completeness’
- 10.30: Paul Taylor (Imperial), ‘A categorical general recursion theorem’
- 11.30: Barry Jay (Sydney), ‘Data categories’
- 12.00: Peter Johnstone (Cambridge), ‘Cartesian functors between toposes’
- 13.45: Bart Jacobs (Amsterdam), ‘Inheritance and coercion’
- 14.15: Mike Fourman (Edinburgh), ‘Classifying cardinalities’
- 15.30: Mamuka Jibladze (Tbilisi), ‘A presentation of the initial lift algebra’
- 16.00: John Stell (Keele), ‘Order-sorted theories’
- 16.30: Peter Freyd (Pennsylvania), ‘Paracategories’

### Sunday

- 09.45: Jaap van Oosten (Aarhus), ‘The modified realizability topos’
- 10.15: Alex Simpson (Edinburgh), ‘The limit-colimit coincidence in synthetic domain theory’
- 11.30: Chris Townsend (Imperial), ‘Localic Priestley duality’
- 11.50: Jim Otto (McGill), ‘Sketches and resolutions’
- 12.20: John Power (Edinburgh), ‘Algebraic structure on categories enriched in bicategories’

## Sixtieth meeting: Cambridge, 27–28 January 1996

### Saturday

- 09.30: Max Kelly (Sydney), ‘2-categories of equipments and adjunctions therein’
- 11.00: Francis Borceux (Louvain), ‘On finitely standard toposes’
- 11.30: Peter Johnstone (Cambridge), ‘What should Giraud’s Theorem say?’
- 12.00: Michael Abbott (Abingdon), ‘An internal language based on indexed categories’
- 14.00: Yves Diers (Valenciennes), ‘Categories of finitary algebraic sets’
- 14.45: Carsten Butz (Utrecht), ‘On the space of points of a topos’
- 16.00: Elias David (London), ‘Topological representation of posets’
- 16.30: Paul Taylor (Imperial), ‘Algebraic compactness and well-founded coalgebras’

### Sunday

- 09.30: Ieke Moerdijk (Utrecht), ‘The path space of a topos’
- 10.00: Jim Otto (McGill), ‘Resolution into free CC categories’
- 11.00: Harold Simmons (Manchester), ‘A curious semantics for linear logic using abelian groups’
- 11.45: Ralph Loader (Oxford), ‘Normalization by calculation’

## Sixty-first meeting: Dunkerque, 8–9 June 1996

### Saturday

- 09.15: Yves Diers (Valenciennes), ‘Algebraic equations relative to an algebraic theory’
- 10.05: Jürgen Koslowski (Braunschweig), ‘A convenient category of games for interactions’
- 11.00: François Lamarche (Nancy), ‘On constants in the free symmetric monoidal closed category’
- 11.35: Cristina Pedicchio (Trieste), ‘Pseudogroupoids and congruence modular varieties’
- 12.10: Martin Hyland (Cambridge), ‘Duality in presheaves categories’
- 14.30: Max Kelly (Sydney), ‘The category of domains for limits and weighted limits’
- 15.20: Laurence Nison (Valenciennes), ‘Catégorie des anneaux rationnels gradués’
- 16.15: Djordje Cubrič (Cambridge), ‘Yoneda lemma and normalization’
- 16.50: Thomas Streicher (Darmstadt), ‘Inductive construction of repletion’
- 17.25: Walter Tholen (York), ‘Separation versus connectedness’

### Sunday

- 09.30: Peter Johnstone (Cambridge), ‘Remarks on quintessential and persistent localizations’
- 10.05: Francis Borceux (Louvain), ‘Morita equivalence of arbitrary sketches’
- 11.00: Steve Lack (Sydney), ‘The extensive reflection of a distributive category’
- 11.35: Pierre Ageron (Caen), ‘Accessible categories with (finite) pullbacks’
- 12.10: Anders Kock (Aarhus), ‘Remarks on the Bianchi identity’

## Sixty-second meeting: Utrecht, 26–27 October 1996

### Saturday

- 10.00: Anders Kock (Aarhus), ‘The maximal atlas of a foliation’
- 10.30: Sergei Soloviev (Durham), ‘Voreadou’s mistake and its consequences’
- 11.30: Mamuka Jibladze (Tbilisi), ‘Lower bagdomain as glueing’
- 12.00: Thomas Streicher (Darmstadt), ‘(Partial) geometric morphisms between partial lex categories’
- 14.30: Reinhard Börger (Hagen), ‘Morita equivalence of monads’
- 15.00: François Lamarche (Nancy), ‘A new kind of fibration?’
- 16.00: Till Plewe (Imperial), ‘Quotient maps of locales, II’
- 16.15: Enrico Vitale (Dunkerque), ‘Localizations of module categories’

### Sunday

- 10.00: Jonathon Funk (McGill), ‘A characterization of the algebras for the symmetric monad’
- 10.30: Jürgen Koslowski (Braunschweig), ‘Strategies in the bicategory of games’
- 11.30: Steve Awodey (Chicago), ‘Sheaf representation for small topoi’
- 12.00: Japie Vermeulen (Cape Town), ‘Compact sites’

## Sixty-third meeting: Bangor, 1–2 March 1997

### Saturday

- 09.30: Peter Johnstone (Cambridge), ‘Which first-order theories have classifying toposes?’
- 10.30: Klaus Heiner Kamps (Hagen), ‘A homotopy bigroupoid of a topological space’
- 11.40: Tim Porter (Bangor), ‘Topological quantum field theories, stacks and simplicial groups’
- 14.15: Paul Taylor (Queen Mary), ‘The difference between induction and recursion’
- 15.00: Anne Heyworth (Bangor), ‘Categories and rewriting’
- 16.15: Graham Ellis (Galway), ‘Enumerating prime-power homotopy types’

### Sunday

- 09.30: Peter Hines (Bangor), ‘Two-way automata, compact closed categories, and Girard’s resolution formula’
- 10.30: Ismael Mohammed (Bangor), ‘Residuated mappings’
- 11.30: Ronnie Brown (Bangor), ‘Using presentations and crossed modules of groupoids to compute identities among relations’

## Sixty-fourth meeting: Braunschweig, 10–11 May 1997

### Friday

13.00: Cristina Pedicchio (Trieste), ‘Exactness and regularity for locally presentable categories’

### Saturday

09.00: Dana Scott (Carnegie–Mellon), ‘Categories and domains’

09.50: Jaap van Oosten (Utrecht), ‘Combinatory algebras and categories of domains’

10.45: Jiří Adámek (Braunschweig), ‘Injectivity in locally presentable categories’

11.25: Jiří Rosický (Brno), ‘Regular and exact completions of topological spaces’

14.00: Thomas Streicher (Darmstadt), ‘Moens’ theorem for categories with pullbacks’

14.40: Manuela Sobral (Coimbra), ‘Global and étalé descent in **Top**’

15.20: Till Plewe (Imperial), ‘A look at continuous bijections from the localic perspective’

16.15: Reinhold Heckmann (Saarland), ‘A unified view of categories of structured sets’

16.55: Jiří Velebil (Brno), ‘On flat distributors as a generalization of approximable relations’

17.35: Christoph Lüth (Bremen), ‘Monads and modular term rewriting’

### Sunday

09.00: Peter Johnstone (Cambridge), ‘ $\text{hcf}(63, 64) = 1$ ’

09.40: Steve Awodey (Chicago), ‘Topological completeness for higher-order logic’

10.20: Carsten Butz (Aarhus), ‘Geometric morphisms and their relation to logic’

11.15: Anders Kock (Aarhus), ‘A geometric construction of the Levi-Civita connection’

11.55: Ieke Moerdijk (Utrecht), ‘Proper maps and lax descent’

## Sixty-fifth meeting: Aarhus, 1–2 November 1997

### Saturday

09.30: Mamuka Jibladze (Tbilisi), ‘Cosheaves, coframes, cotoposes: some new facts, some old questions’

10.45: John Power (Edinburgh), ‘Weak higher-dimensional categories’

11.30: Erik Palmgren (Uppsala), ‘Constructive nonstandard analysis’

14.00: Marcelo Fiore (Edinburgh), ‘Towards a categorical theory of binding’

14.45: Sergei Soloviev (Durham), ‘Finite completeness theorem for multiplicative intuitionistic linear logic’

16.00: Carsten Butz (Aarhus), ‘Remarks on the structure of finitely presented Heyting algebras’

16.45: Dimitry Pataraiia (Tbilisi), ‘A constructive proof of the fixed-point theorem for DCPO’s’

### Sunday

09.15: Reinhard Börger (Hagen), ‘Tensor products of orthomodular posets and related structures’

10.30: Anders Kock (Aarhus), ‘Extension theory for local groupoids’

11.15: Jürgen Koslowski (Braunschweig), ‘A double category of strategies’

## Sixty-sixth meeting: Birmingham, 28–29 March 1998

### Friday

15.00: Paul Taylor (Queen Mary), ‘Two intertwined stories about induction and recursion’

### Saturday

09.30: Peter Johnstone (Cambridge), ‘On (not-quite-)toposes of (not-quite-)coalgebras’

10.10: Enrico Vitale (Louvain), ‘Picard and Brauer bigroups’

11.15: Adam Eppendahl (Queen Mary), ‘Arithmetic universes and pull-back theories’

11.50: Ralph Loader (Edinburgh), ‘Yet more adequacy proofs’

14.00: Steven Vickers (Imperial), ‘Sheaves and frame presentations’

14.40: Paola Maneggia (Birmingham), ‘Polymorphism and logical predicates’

15.50: Paul Taylor (Queen Mary), ‘Quadrality’

### Sunday

09.30: Barney Hilken (Manchester), ‘Sheaf models of modal logic’

10.30: Natasha Alechina (Birmingham), ‘Relating Kripke and categorical semantics for intuitionistic modal logic’

11.20: Eike Ritter (Birmingham), ‘On the semantics of classical disjunction’

12.00: Martin Hyland (Cambridge), ‘Invariants and proofs’

## Sixty-seventh meeting: Utrecht, 30–31 May 1998

### Saturday

- 09.00: John Power (Edinburgh), ‘Higher-dimensional categories, I’  
10.00: Ronnie Brown (Bangor), ‘Computation of free crossed resolutions of groups’  
10.35: Kirill Mackenzie (Sheffield), ‘Duality for double structures’  
11.15: Thomas Streicher (Darmstadt), ‘A model for computable analysis’  
11.50: George Janelidze (Tbilisi), ‘Categorical, homological and universal-algebraic approach to central extensions’  
13.45: John Power (Edinburgh), ‘Higher-dimensional categories, II’  
14.45: Jiří Velebil (Praha), ‘Conservative cocompletions of categories’  
15.20: Jürgen Koslowski (Braunschweig), ‘Bicategorical version of the Chu construction’  
16.05: Mike Heather (Northumbria), ‘The pull-back functor as the basis for deontic logic’  
16.40: Steve Awodey (Carnegie–Mellon), ‘Topological representation of the  $\lambda$ -calculus’  
17.15: Fred Linton (Wesleyan), ‘Monadicity of Banach spaces over free cones’

### Sunday

- 09.00: John Power (Edinburgh), ‘Higher-dimensional categories, III’  
10.00: Max Kelly (Sydney), ‘On the canonical algebraic structure of a category’  
10.35: Paddy McCrudden (Sydney), ‘Higher-dimensional algebra in quantum groups’  
11.25: Claudio Hermida (Edinburgh), ‘Higher-dimensional multicategories — some pieces of a PZZL’  
12.00: Tom Leinster (Cambridge), ‘A definition of weak  $n$ -category’

## Sixty-eighth meeting: Brno, 29–30 August 1998

### Saturday

- 09.00: Peter Johnstone (Cambridge), ‘How bad can a category of sheaves be?’  
09.40: Jiří Adámek (Braunschweig), ‘Continuous lattices and continuous categories revisited’  
10.40: Cristina Pedicchio (Trieste), ‘A characterization theorem for theories of varieties’  
11.20: Hans Porst (Bremen), ‘Minimal generators in varieties’  
12.00: Jan Jürjens (Bremen), ‘On a problem of Gabriel and Ulmer’  
14.00: Alex Simpson (Edinburgh), ‘Elementary axioms for categories of classes’  
14.40: Pedro Resende (Lisboa), ‘Quantale modules and observational logic’  
15.20: Rolf Rother (Bremen), ‘Strengthening of homogeneity in categorical algebra’  
16.20: Libor Polák (Brno), ‘On equational logic (for semigroups)’  
17.00: Milan Sekanina (Brno), ‘Shape in computing’  
17.40: Ondřej Kameník (Brno), ‘Fixed point semantics for synchronous processes’

### Sunday

- 09.00: Richard Wood (Dalhousie), ‘Adjunctions for equipments’  
09.40: Enrico Vitale (Louvain), ‘On the exact completion of the homotopy category’  
10.40: Mamuka Jibladze (Tbilisi), ‘Scattered toposes’  
11.20: Jiří Velebil (Praha), ‘1-step cocompletions’  
12.00: Jiří Rosický (Brno), ‘How algebraic is algebra?’

## Sixty-ninth meeting: Trieste, 28–29 November 1998

### Saturday

- 09.30: Bill Lawvere (Buffalo), ‘Toposes of laws of motion’  
10.15: Anders Kock (Aarhus), ‘Strength of amazing right adjoints’  
10.50: George Janelidze (Tbilisi), ‘Homological algebra in additive categories via descent theory’  
11.50: Marco Grandis (Genova), ‘An intrinsic homotopy theory for simplicial complexes’  
12.25: Enrico Vitale (Louvain), ‘Factorization systems for symmetric cat-groups’  
15.00: Jiří Adámek (Braunschweig), ‘ $M$ -completeness is seldom monadic over graphs’  
15.35: Jiří Rosický (Brno), ‘Generalized varieties’  
16.10: Ivan Le Creurer (Louvain), ‘Descent of internal structures’

17.10: Dominique Bourn (Dunkerque), ‘Normal monomorphisms and Mal’cev objects in protomodular categories’

17.45: Marino Gran (Trieste), ‘Internal groupoids in Mal’cev categories’

18.20: Heinrich Kleisli (Fribourg), ‘A model of linear logic revisited’

#### **Sunday**

09.00: Joe Goguen (San Diego), ‘Sheaf theory and concurrency in computer science’

09.35: Bob Walters (Como), ‘On the algebra of feedback and systems with boundary’

10.10: Jürgen Koslowski (Braunschweig), ‘\*-linear bicategories’

11.10: Fred Linton (Wesleyan), ‘Banach spaces *are* monadic — just not quite over Sets’

11.45: Walter Tholen (York), ‘Total cocompleteness of the formal product completion’

12.20: Maria Manuel Clementino (Coimbra), ‘A categorical setting for local compactness’

### **Seventieth meeting: Cambridge, 27–28 February 1999**

#### **Saturday**

09.30: Gavin Wraith (Sussex), ‘Byways I wish I had explored further’

10.05: Gonzalo Reyes (Montréal), ‘Toposes of types’

10.40: Marek Zawadowski (Warszawa), ‘Duality between disks and simple categories’

11.40: Ieke Moerdijk (Utrecht), ‘On the Connes–Kreimer Hopf algebra’

12.15: Chris Mulvey (Sussex), ‘Fouls quantales’

14.00: Anders Kock (Aarhus), ‘Infinitesimal aspects of Riemannian geometry’

14.35: Marcelo Fiore (Sussex), ‘Abstract syntax and variable binding, I’

15.20: Daniele Turi (Edinburgh), ‘Abstract syntax and variable binding, II’

16.30: Giuseppe Rosolini (Genova), ‘Equilogical spaces and filter spaces’

17.05: Tibor Beke (Utrecht), ‘Homotopy theory of models of a finite limit theory in a Grothendieck topos’

17.40: Peter Johnstone (Cambridge), ‘Are fixpoint objects  $\Omega$ -discrete?’

#### **Sunday**

09.15: Steven Vickers (Imperial), ‘Strongly algebraic = SFP (topically)’

10.00: Alex Simpson (Edinburgh), ‘Equational lifting monads’

11.00: Tom Leinster (Cambridge), ‘**fc**-multicategories’

11.45: Jürgen Koslowski (Braunschweig), ‘Closed linear bicategories and local \*-autonomy’

12.20: Neil Ghani (Leicester), ‘Monads and conditional rewriting’

14.00: Thomas Hildebrandt (Aarhus), ‘Finite delay in presheaves’

14.35: Paul Taylor (Queen Mary), ‘Lattice-dual proofs for open and closed/proper/compact results’

15.10: Martin Wehr (Edinburgh), ‘Higher-dimensional algebraic data types’

15.45: Matías Menni (Edinburgh), ‘ $\omega$ -projecting quotients of countably based spaces’

### **Seventy-first meeting: Louvain-la-Neuve, 16–17 October 1999**

#### **Saturday**

09.30: Jean Bénabou (Paris-Nord), ‘TBF’

10.15: René Lavendhomme (Louvain), ‘Deformation of algebraic structures’

11.30: Tom Leinster (Cambridge), ‘Homotopy monoids’

12.15: Jürgen Koslowski (Braunschweig), ‘A game-like construction on certain Chu-bicategories’

14.30: Jiří Rosický (Brno), ‘Uncountable orthogonality is a closure property’

15.15: Thomas Streicher (Darmstadt), ‘Impredicative implies untyped’

16.30: Dominique Bourn (Dunkerque), ‘Mal’cev groupoids and realization of cohomology groups’

17.00: Anders Kock (Aarhus), ‘Anafunctors and fibrations’

17.30: Richard Wood (Dalhousie), ‘Some remarks on distributive laws’

### Sunday

- 09.30: Ronnie Brown (Bangor), ‘The equivalence of cubical and globular  $\infty$ -categories’  
10.15: Anthony Bak (Bielefeld), ‘Global actions: the algebraic counterpart of a topological space’  
11.15: George Janelidze (Tbilisi), ‘Internal crossed modules’

### Seventy-second meeting: Bruxelles, 8–9 April 2000

#### Saturday

- 10.00: Bill Lawvere (Buffalo), ‘Toposes of laws of motion’  
11.00: Dominique Bourn (Dunkerque), ‘Protomodularity and strong protomodularity’  
12.00: Jiří Rosický (Brno), ‘Injective hulls are not natural’  
14.30: Claudio Hermida (Lisboa), ‘Coherence implies universality’  
15.20: Mamuka Jibladze (Louvain), ‘Central extensions and nilpotence for Lawvere theories’  
16.30: Pedro Resende (Lisboa), ‘Quantaes as spaces of dynamical systems’  
17.20: Mike Heather (Northumbria), ‘Philosophical aspects and fundamentals of category theory applicable to subjects like quantum theory’

#### Sunday

- 10.00: Isar Stubbe (Louvain), ‘A word on next week’s workshop’  
10.30: Joachim Lambek (McGill), ‘Deductive systems and categories’  
11.30: Jean Bénabou (Paris-Nord), ‘Partial functors and generalized fibrations’

### Seventy-third meeting: Braunschweig, 29–30 April 2000

#### Saturday

- 09.30: Bill Lawvere (Buffalo), ‘Galilean “monoids” and the algebra of time’  
10.10: Jiří Rosický (Brno), ‘Weak factorization systems’  
11.15: Lutz Schröder (Bremen), ‘Alternative descriptions of the Eilenberg–Moore category’  
11.55: Jaap van Oosten (Utrecht), ‘Relative and modified realizability’  
14.30: Fred Linton (Wesleyan), ‘Elementary row operations — Gauss meets Yoneda’  
15.10: Eugenia Cheng (Cambridge), ‘Equivalence between approaches to the theory of opetopes’  
16.15: Mamuka Jibladze (Louvain), ‘The continuing story of relative Booleaness’  
16.55: Jan Paseka (Brno), ‘On Morita equivalence of involutive quantaes’  
17.35: Celestin Nkuimi-Jugnia (Louvain), ‘Amalgamation in the category of modules over a quantale’

#### Sunday

- 09.30: Walter Tholen (York), ‘Exponentiability and injectivity’  
10.10: Robin Cockett (Calgary), ‘Did we ever really understand products and coproducts?’  
11.15: Jürgen Koslowski (Braunschweig), ‘Tricategories of modules?’  
11.55: Jiří Adámek (Braunschweig), ‘Algebraically complete categories and essential localizations of varieties’

### Seventy-fourth meeting: Cambridge, 4–5 November 2000

#### Saturday

- 09.00: Eugenia Cheng (Cambridge), ‘The relationship between the opetopic and classical approaches to bicategories’  
09.35: Tom Leinster (Cambridge), ‘Deligne’s conjecture and higher-dimensional category theory’  
10.10: Paul Taylor (Queen Mary), ‘Abstract Stone duality’  
11.10: Alex Simpson (Edinburgh), ‘A universal characterization of the Euclidean closed interval’  
12.00: Peter Johnstone (Cambridge), ‘Locally connected functors?’  
12.35: Steven Vickers (Open), ‘Toposes as generalized spaces in the geometry of concurrency’  
14.00: Jiří Adámek (Braunschweig), ‘Small object argument revisited’  
14.40: Pierre Ageron (Caen), ‘Inductive and almost inductive sketches’  
15.15: Vincent Schmitt (Leicester), ‘2-sided enrichments and sheaves’  
16.10: Martin Escardó (Birmingham), ‘The frame of Scott continuous nuclei on a locale’  
17.00: Nicola Gambino (Manchester), ‘Internal frame-valued semantics for constructive set theory’  
17.35: Jürgen Koslowski (Braunschweig), ‘Poly-bicategories’



### Sunday

- 09.00: Harold Simmons (Manchester), ‘Various kinds of patch spaces’  
09.50: Maria Manuel Clementino (Coimbra), ‘A convergence approach to exponentiable, effective descent and triquotient maps’  
10.20: Konstantinos Viglas (Imperial), ‘Perfect maps as lax-coequalisers in  $\text{Loc}$ ’  
11.05: Jiří Velebil (Praha), ‘Iteration monads’  
11.40: Edmund Robinson (Queen Mary), ‘An abstract approach to realizability’  
12.15: Pieter Hofstra (Utrecht), ‘Realizability toposes’  
13.45: Stefan Milius (Braunschweig), ‘Factorization systems in 2-categories’  
14.20: Matías Menni (Edinburgh), ‘Closure operators in exact completions’  
14.50: Luigi Santocanale (Aarhus), ‘On the equational definition of the least prefixed point’  
15.15: Steven Vickers (Open), ‘Localic sup-lattices and topological systems’

## Seventy-fifth meeting: Djursholm, 9–10 June 2001

### Saturday

- 09.30: Peter Johnstone (Cambridge), ‘Another proof of stability for tidy morphisms’  
10.25: Panagis Karazeris (Patras), ‘Injectives for dense inclusions of toposes’  
11.20: Jiří Velebil (Praha), ‘Reflective and coreflective subcategories of presheaves’  
11.40: Nicola Gambino (Manchester), ‘Collection principles in dependent type theory’  
12.15: Peter Aczel (Manchester), ‘Do real numbers form a set?’  
14.15: Thierry Coquand (Göteborg), ‘Constructive analysis of Krull’s principal ideal theorem with sheaf models’  
14.45: Emilia Maietti (Padova), ‘Arithmetic universes as pretoposes with parametrized list objects’  
15.10: Andrej Bauer (Carnegie–Mellon), ‘Propositions as [types]’  
16.10: Eugenia Cheng (Cambridge), ‘Universal cells in weak  $n$ -categories’  
16.40: Sjoerd Crans (Nice), ‘Ingredients for an operadic approach to teisi’  
17.10: Tom Leinster (Cambridge), ‘An overview of operads and multicategories’

### Sunday

- 09.45: Dana Scott (Carnegie–Mellon), ‘The internal logic of equilogical spaces’  
10.20: Giovanni Sambin (Padova), ‘Meet, fundamental symmetry and definitions in predicative topology’  
11.00: Luigi Santocanale (Aarhus), ‘A calculus of circular proofs and its categorical semantics’  
11.30: Stefan Milius (Braunschweig), ‘Infinite trees and completely iterative monads’  
12.05: Peter Dybjer (Göteborg), ‘Sheaves and normalization in cartesian closed categories with coproducts’

## Seventy-sixth meeting: København, 2–3 March 2002

### Saturday

- 09.30: Tom Leinster (Cambridge), ‘Triangulated categories and  $n$ -categories’  
10.30: Eugenia Cheng (Cambridge), ‘Expressing trees as Kelly–Mac Lane graphs’  
11.15: Robin Milner (Cambridge), ‘Bigraphs’  
13.30: Jiří Velebil (Praha), ‘Final coalgebras for arbitrary endofunctors’  
14.15: Hans Porst (Bremen), ‘Presentability in categories of coalgebras’  
15.30: Alex Simpson (Edinburgh), ‘First-order set theory in an elementary topos ...’  
16.00: Carsten Butz (København), ‘... and in a category of classes’

### Sunday

- 09.30: Anders Kock (Aarhus), ‘The stack quotient of a groupoid’  
10.45: Matías Menni (Genova), ‘(More) \new-quantifiers’  
11.30: Jiří Adámek (Braunschweig), ‘Varieties of algebras as categories’

## Seventy-seventh meeting: Braunschweig, 5–6 October 2002

### Saturday

- 09.00: Jiří Rosický (Brno), ‘Injectivity and projectivity in locally presentable categories’
- 09.40: Lawrence Stout (Bloomington), ‘Categories with designated inclusions’
- 10.40: Claudia Centazzo (Louvain), ‘A duality relative to a limit doctrine’
- 11.20: Michael Abbott (Leicester), ‘Categories of containers’
- 12.00: Neil Ghani (Leicester), ‘Explicit substitutions, categorically’
- 14.25: Sjoerd Crans (Strasbourg), ‘Strictification of trihomomorphisms’
- 15.05: Richard Steiner (Glasgow), ‘Chain complexes and  $\omega$ -categories’
- 16.05: Jürgen Koslowski (Braunschweig), ‘A monadic approach to poly-categories’
- 16.45: Luigi Santocanale (Bordeaux), ‘Right adjoints are completely iterative in locally cartesian closed extensive categories’
- 17.25: Jiří Velebil (Braunschweig), ‘Monads that give rise to monoids’

### Sunday

- 09.00: Enrico Vitale (Louvain), ‘Low-dimensional cohomology of crossed modules’
- 09.40: Dieter Leseberg (Berlin), ‘Categorical properties of topology and uniformity in the realm of equiconvergence’
- 10.40: Luca Mauri (Duisburg), ‘Algebraic theories and monoidal categories’
- 11.20: Lurdes Sousa (Viseu), ‘How accessible are categories of algebras?’
- 12.00: Jiří Adámek (Braunschweig), ‘On algebraic exactness’

## Seventy-eighth meeting: Strasbourg, 15–16 February 2003

### Saturday

- 09.05: Albert Burroni (Paris VII), ‘ $\omega$ -graphes,  $\omega$ -multigraphes,  $\omega$ -polygraphes’
- 09.50: Nick Rossiter (Northumbria), ‘From classical to quantum databases with applied pullbacks’
- 10.50: Philippe Gaucher (Strasbourg), ‘La catégorie des flots comme cadre approprié pour une théorie homotopique du parallélisme’
- 11.35: Rudger Kieboom (Brussel), ‘Crossed modules revisited’
- 14.05: Pierre Ageron (Caen), ‘Catégories monoïdales croisées’
- 14.50: Christopher Townsend (Open), ‘Locale pullback via dcpo’s’
- 15.35: Vincent Schmitt (Leicester), ‘Préfaisceaux enrichis et plats et espaces métriques généralisées’
- 16.05: John Power (Edinburgh), ‘Connectivity and abstraction for hierarchical graphs’
- 17.05: Eugenia Cheng (Cambridge), ‘Comparing  $n$ -categories: Penon vs. Leinster’
- 17.35: Marino Gran (Calais), ‘Complétions exactes semi-abéliennes’

### Sunday

- 09.05: Jürgen Koslowski (Braunschweig), ‘Bisimulations for automata, categorically’
- 09.35: Tor Lowen (Brussel), ‘A generalization of the Gabriel–Popescu theorem’
- 10.05: Peter Johnstone (Cambridge), ‘The topos of music’
- 11.05: Jiří Rosický (Brno), ‘Semi-coreflective subcategories of locally presentable categories’
- 11.35: Tom Leinster (IHES), ‘Objects of categories as complex numbers’
- 12.05: François Lamarche (Nancy), ‘Une approche géométrique des objets symboliques et syntaxiques’

## Seventy-ninth meeting: Utrecht, 28–29 June 2003

### Saturday

- 09.00: Fred Linton (Wesleyan), ‘Associativity of tensor products in the context of varieties’
- 09.30: Christopher Townsend (Open), ‘Axioms for a category of spaces’
- 10.30: Clemens Berger (Nice), ‘Higher categorical structures via presheaves, I’
- 11.45: Carsten Butz (København), ‘The Makkai topos of a coherent theory’
- 12.15: Jonas Eliasson (Uppsala), ‘Ultrasheaves and double negation’
- 14.30: Eugenia Cheng (Cambridge), ‘A construction of the operad for Leinster’s weak  $n$ -categories’
- 15.00: Thorsten Palm (York), ‘Dendrotopic sets for weak  $\infty$ -categories’

- 16.00: Clemens Berger (Nice), ‘Higher categorical structures via presheaves, II’
- 17.15: Erik Palmgren (Uppsala), ‘Groupoids and weak local cartesian closedness’
- 17.45: Michael Abbott (Leicester), ‘Quotient of containers’

**Sunday**

- 09.00: Paul Taylor (Queen Mary), ‘Abstract Stone duality’
- 09.30: Simona Paoli (Leicester), ‘ $\mathbf{Cat}_n$ -groups in homological and homotopical algebra’
- 10.30: Clemens Berger (Nice), ‘Higher categorical structures via presheaves, III’
- 11.45: Steve Awodey (Carnegie–Mellon), ‘Ideal completeness of categories of classes’
- 12.15: Ivar Rummelhoff (Oslo), ‘Universes as fixed points’
- 12.45: Chris Mulvey (Sussex), ‘The Stone–Čech compactification of locales’

**Eightieth meeting: Cambridge, 3–4 April 2004**

**Saturday**

- 09.10: Jiří Rosický (Brno), ‘Accessible quotients and homotopy’
- 09.40: Jürgen Koslowski (Braunschweig), ‘Categorical transition systems and the comprehension scheme’
- 10.10: Benno van den Berg (Utrecht), ‘Inductive types and exact completion’
- 11.10: Paul Taylor (Manchester), ‘The relationship between abstract Stone duality and arithmetic universes’
- 11.40: Claire Kouwenhoven–Gentil (Utrecht), ‘Algebraic set theory in the effective topos’
- 12.10: Jiří Velebil (Praha), ‘Connected morphisms of monads’
- 15.00: Dominique Bourn (Calais), ‘On the direct image of intersections in the exact homological categories’
- 15.30: Gábor Lukács (Bremen), ‘Progress report: on lifted closure operators’
- 16.00: Rasmus Møgelberg (København), ‘Categorical models of parametric polymorphism’
- 17.00: Keith Hardie (Cape Town), ‘A twisted triple category of 2-track commutative cubes’
- 17.30: Klaus Heiner Kamps (Hagen), ‘A van Kampen theorem for the homotopy double groupoid of a Hausdorff space’
- 18.00: Ronnie Brown (Bangor), ‘Nonabelian algebraic topology’

**Sunday**

- 09.10: Tom Leinster (Glasgow), ‘Self-similarity’
- 09.40: Richard Steiner (Glasgow), ‘ $\omega$ -categories and chain complexes’
- 10.10: Krzysztof Worytkiewicz (), ‘A model structure à la Thomason on  $2\text{-Cat}$ ’
- 11.10: Martin Escardó (Birmingham), ‘Synthetic topology’
- 11.40: Steven Vickers (Birmingham), ‘The double powerlocale and its relationship to lots of things’
- 12.10: Don MacInnes (Manchester), ‘A different look at structure-preserving free completions’
- 15.00: Vincent Schmitt (Leicester), ‘Parametrised accessibility’
- 15.30: Jonathon Funk (Regina), ‘Definable completeness’
- 16.00: Christopher Townsend (Open), ‘Effective descent via natural transformations’

**Eighty-first meeting: Coimbra, 9–10 April 2005**

**Saturday**

- 09.00: Jiří Adámek (Braunschweig), ‘Wellfounded coalgebras’
- 09.35: Stefan Milius (Braunschweig), ‘Elgot algebras: a base for denotational semantics’
- 10.10: Pedro Resende (Lisboa), ‘Localic germ groupoids of inverse semigroups’
- 11.15: Rudger Kieboom (Brussel), ‘Quillen model category structures for homotopy of internal categories’
- 11.50: Tim Van der Linden (Brussel), ‘Homotopy versus homology of simplicial objects’
- 12.25: Federico de Marchi (Utrecht), ‘Glueing monads: a descent problem’
- 15.00: Tom Leinster (Glasgow), ‘The Thompson groups’
- 15.35: João Xarez (Aveiro), ‘A convenient setting for obtaining Galois theories with stable units’
- 16.10: Valentina Rossi (Udine), ‘Galois theory and double central extensions’
- 17.15: Tomas Everaert (Brussel), ‘Commutators and Galois theory’
- 17.50: Marino Gran (Calais), ‘Homology of precrossed modules and Galois theory’

## Sunday

- 09.00: Francis Borceux (Louvain), ‘Initial normal covers in bi-implicative toposes’  
09.35: Claudio Hermida (Lisboa), ‘?’  
10.10: Christoph Schubert (Bremen), ‘Every topological category is a category of lax algebras’  
11.15: Philippa Malbos (Paris VII), ‘Homology and term rewriting systems’  
11.50: Paulo Mateus (Lisboa), ‘Minimization of quantum automata’  
12.25: Walter Tholen (York), ‘Weak factorization systems’

## Eighty-second meeting: Amiens, 8–9 October 2005

(Commemorating the centenary of Charles Ehresmann)

### Friday

- 10.00: Andrée Ehresmann (Picardie), ‘Itinéraire d’un mathématicien’  
11.00: Jean Bénabou (Paris-Nord), ‘Some of the things I learned from Charles Ehresmann’  
14.00: Pierre Ageron (Caen), ‘Autour d’Ehresmann: Bourbaki, Cavailles, Lautman’  
14.45: René Guitart (Paris VII), ‘Charles Ehresmann, au carrefour des structures locales et algébriques’  
15.45: Francis Borceux (Louvain), ‘Et si l’intuition devenait rigueur? La réponse de la géométrie différentielle synthétique’  
16.45: George Farre (Georgetown), ‘Evolution of matter as a science’

### Saturday

- 08.45: André Joyal (UQAM), ‘The Gödel incompleteness theorem: a categorical approach’  
09.30: Horst Ibsch (Nantes), ‘Diagrammes d’espaces fibrés principaux et sphères d’homologie’  
10.30: Hirokazu Nishimura (Tsukuba), ‘Three synthetic approaches to total differentials’  
11.15: Jacques Penon (Paris VII), ‘ $\infty$ -catégorification de structures équationnelles’  
14.00: Paulette Libermann (Paris-Diderot), ‘C. Ehresmann and differential geometry’  
14.45: Eduardo Dubuc (Buenos Aires), ‘Bifiltered colimits of categories’  
15.30: Jean Pradines (Toulouse), ‘Preordered sets, granular topologies and Štefan foliations’  
16.30: Anders Kock (Aarhus), ‘A synthetic theory of envelopes of families of curves or surfaces’

### Sunday

- 08.45: Jean Bénabou (Paris-Nord), ‘Locally small cartesian functors’  
09.30: Fred Linton (Wesleyan), ‘Variance vs. Volition’  
10.30: Albert Burroni (Paris VII), ‘Une autre approche des orientaux’  
11.15: Marta Bunge (McGill), ‘On a non-discrete localic generalization of  $\pi_0$ ’  
14.00: Ronnie Brown (Bangor), ‘Groupoid atlases: an introduction’  
14.45: Dominique Bourn (Calais), ‘Action groupoids in protomodular categories’  
15.30: Marco Grandis (Genova), ‘A few points on directed algebraic topology’

## Eighty-third meeting: Glasgow, 6–7 May 2006

### Saturday

- 09.05: Jon Woolf (Liverpool), ‘Derived categories I’  
09.40: Jiří Velebil (Praha), ‘Definable operations in monads’  
10.10: Miles Gould (Glasgow), ‘Coherence for categorified algebraic theories’  
11.10: Tim Van der Linden (Brussel), ‘On the second cohomology group in semi-abelian categories’  
11.40: Yemon Choi (Newcastle), ‘Homological algebra for Banach modules?’  
12.10: Tomas Everaert (Brussel), ‘Relative commutator theory in varieties of  $\Omega$ -groups’  
14.10: Jon Woolf (Liverpool), ‘Derived categories 2’  
14.45: Jürgen Koslowski (Braunschweig), ‘What is the correct notion of morphism for interpolative semi-groups?’  
15.15: Jiří Adámek (Braunschweig), ‘A logic of injectivity’  
16.15: Alexander Kurz (Leicester), ‘Relating algebras on Ind- and Pro-completions’  
16.45: Panagis Karazeris (Patras), ‘Flatness of functors into sites’  
17.15: Christopher Townsend (), ‘A representation theorem for geometric morphisms’

### Sunday

- 09.15: Jon Woolf (Liverpool), ‘Derived categories 3’  
10.00: Paul Taylor (Manchester), ‘Computable real analysis without set theory or Turing machines’  
10.30: Mehrnoosh Sadrzadeh (Southampton), ‘Between algebra and coalgebra: an application’  
11.30: Bob Coecke (Oxford), ‘Quantum measurements as Eilenberg–Moore coalgebras’  
12.00: Emmanuel Galatoulas (Athens), ‘Bicategorical notions of quantum mechanical processes: beyond quantaloids’  
12.30: Tom Leinster (Glasgow), ‘A universal Banach space’

## Eighty-fourth meeting: Braunschweig, 14–15 October 2006

### Saturday

- 09.00: Bob Coecke (Oxford), ‘Categorical axiomatics of quantum entanglement’  
09.45: Reinhard Werner (), ‘A physicist’s favourite category’  
10.50: Jan Paseka (Brno), ‘Projective quantales and related structures: a general view’  
11.25: David Kruml (Brno), ‘Girard pairs of quantales’  
12.00: Graham White (Queen Mary), ‘Categorical logic and the philosophy of action’  
14.30: Bob Coecke (Oxford), ‘Categorical axiomatics of quantum measurement’  
15.15: Stefan Milius (Braunschweig), ‘Elgot monads’  
16.20: Jiří Velebil (Praha), ‘Dense  $KZ$ -doctrines in 2-categories’  
16.55: Panagis Karazeris (Patras), ‘Completeness of cocompletions in a relative setting’  
17.30: Reinhard Börger (Hagen), ‘Integration by a universal property’

### Sunday

- 09.00: Bob Coecke (Oxford), ‘Classicality from categorical quantum axiomatics’  
09.45: Anders Kock (Aarhus), ‘Connections and path connections in groupoids’  
10.50: Lurdes Sousa (Viseu), ‘Revisiting the orthogonal subcategory and the injective subcategory problems’  
11.25: Manuela Sobral (Coimbra), ‘Logic of implications in algebra and coalgebra’  
12.00: Jürgen Koslowski (Braunschweig), ‘A new way of composing spans’

## Eighty-fifth meeting: Nice, 24–25 March 2007

### Saturday

- 09.15: Peter Johnstone (Cambridge), ‘Artin glueing for quasitoposes’  
09.45: Dominique Bourn (Calais), ‘On the classification of “non-pointed additive” categories’  
10.15: Giuseppe Metere (Milano), ‘The Ziggurat of exact sequences of  $n$ -groupoids’  
11.20: Richard Garner (Uppsala), ‘When “pseudo” comes for free’  
11.50: Miles Gould (Glasgow), ‘Presentation-independence of categorified operadic theories’  
14.45: Marco Grandis (Genova), ‘Weak cubical categories’  
15.15: Tom Leinster (Glasgow), ‘Jónsson–Tarski toposes’  
15.45: Graham White (Queen Mary), ‘2-categories and the philosophy of action’  
16.50: François Lamarche (Nancy), ‘Beating the Joyal paradox: things that are to categories what Boolean algebras are to posets’  
17.20: Luigi Santocanale (Provence), ‘Derived semidistributive lattices’

### Sunday

- 09.45: Joachim Kock (Barcelona), ‘Polynomial functors and trees’  
10.15: Michael Batanin (Macquarie), ‘Opetopes and polynomial monads’  
11.20: Denis-Charles Cisinski (Paris-Nord), ‘Model categories’  
12.00: Jeff Egger (), ‘On the definition of  $C^*$ -algebra’  
12.40: Clemens Berger (Nice), ‘Small  $CW$  models for Eilenberg–Mac Lane spaces’

## Eighty-sixth meeting: Nancy, 8–9 September 2007

### Saturday

- 09.30: Steve Awodey (Carnegie–Mellon), ‘Homotopy type theory’
- 10.20: Philippe Gaucher (Paris VII), ‘Homotopical semantics of parallel composition in CCS’
- 11.30: Krzysztof Worytkiewicz (Ecole Polytechnique), ‘The folk model structure for  $\omega$ -categories’
- 13.45: Nicola Gambino (UQAM), ‘The associated sheaf functor in Algebraic Set Theory’
- 14.30: Peter Johnstone (Cambridge), ‘Quadrangle Clubs’
- 15.45: Paul-André Mellies (CNRS), ‘Parametric models and duality’
- 16.30: Henrik Forsell (Carnegie–Mellon), ‘First-order logical duality’

### Sunday

- 09.45: Mark Weber (Paris VII), ‘Parametric right adjoints and generalized nerves’
- 10.15: Julia Goedecke (Cambridge), ‘A comparison theorem for simplicial resolutions’
- 11.15: Duško Pavlović (Oxford), ‘Geometry of abstraction in quantum computation’

## Eighty-seventh meeting: Patras, 22–23 March 2008

(celebrating the seventieth birthday of Anders Kock)

### Friday

- 16.30: André Joyal (UQAM), ‘Homotopy algebra’
- 18.00: Anders Kock (Aarhus), ‘A combinatorial theory of geometric distributions’

### Saturday

- 09.30: Gonzalo Reyes (Montréal), ‘Problems of analysis in some toposes’
- 11.00: Marek Zawadowski (Warszawa), ‘Ordered face structures’
- 16.00: Joachim Kock (Barcelona), ‘Polynomial functors and trees’
- 16.50: Panagis Karazeris (Patras), ‘Toposes of self-similar systems’
- 17.45: Eugenia Cheng (Sheffield), ‘Terminal coalgebras’

### Sunday

- 09.30: Tom Leinster (Glasgow), ‘The cardinality of a metric space’
- 10.20: George Raptis (Oxford), ‘Homotopy theory of posets’
- 11.15: Anders Kock (Aarhus), ‘The stack quotient of a groupoid’

## Eighty-eighth meeting: Cambridge, 4–5 April 2009

(celebrating the sixtieth birthdays of Martin Hyland and Peter Johnstone)

### Saturday

- 09.30: Dana Scott (Carnegie–Mellon), ‘Higher-order modal modelling’
- 10.00: Richard Garner (Cambridge), ‘Topological and simplicial methods of type theory’
- 11.00: Marcelo Fiore (Cambridge), ‘Algebraic type theory’
- 11.30: Pierre-Louis Curien (Paris VII), ‘The duality of computation under focus’
- 12.00: Olivia Caramello (Cambridge), ‘Lattices of theories’
- 14.45: Nicholas Duncan (Cambridge), ‘Gros and petit toposes’
- 15.15: Toby Kenney (Banska Bystrica), ‘Free diads’
- 15.45: Giuseppe Rosolini (Genova), ‘Groupoids in the effective topos’
- 16.45: John Power (Bath), ‘Generalising Lawvere theories to an axiomatically defined base’
- 17.15: Bill Lawvere (Buffalo), ‘Open problems in topos theory’

### Sunday

- 09.30: Mike Fourman (Edinburgh), ‘Classifying quantales’
- 10.00: Ieke Moerdijk (Utrecht), ‘On the notion of Reedy category’
- 11.00: Nicola Gambino (Palermo), ‘Monads in double categories’
- 11.30: Dominic Verity (Macquarie), ‘On the canonicity of complicit stratifications’
- 12.00: Aaron Lauda (Columbia), ‘Categorifying quantum groups’
- 15.00: Tom Leinster (Glasgow), ‘Terminal coalgebras via modules’
- 15.30: Julia Goedecke (Cambridge), ‘Satellites in semi-abelian categories’
- 16.00: Paul-André Mellies (Paris VII), ‘An algebraic presentation of innocence’

## Eighty-ninth meeting: Louvain-la-Neuve, 12–13 December 2009

### Saturday

- 09.00: Jean Bénabou (Paris-Nord), ‘Foliated categories and cartesian functors’
- 09.30: Jiří Rosický (Brno), ‘Definable orthogonality classes are small’
- 10.00: Dirk Hofmann (Aveiro), ‘More on completely distributive spaces’
- 11.00: Dimitri Chikhladze (Sydney), ‘Tannaka representation theorem for a category with a Frobenius fiber functor’
- 11.30: Gavin Seal (Lausanne), ‘Kock–Zöberlein monads from order-adjoint monads on SET’
- 12.00: João Xarez (Aveiro), ‘Well-behaved epireflections in universal algebra’
- 12.30: Andrée Charles Ehresmann (Amiens), ‘Roots and local colimits’
- 14.30: Andrei Akhvediani (Oxford), ‘Interacting observables as composite PROPs’
- 15.00: Apostolos Matzaris (Patras), ‘Cofree coalgebras in accessible categories’
- 15.30: Jürgen Koslowski (Braunschweig), ‘Putting diagrams back into enriched category theory’
- 16.30: Grigoris Protsonis (Patras), ‘Left Kan extensions preserving finite products’
- 17.00: Andrea Montoli (Milano), ‘Semidirect products of internal groupoids’
- 17.30: Zurab Janelidze (Stellenbosch), ‘D. Bourn’s homological lemmas in normal categories’

### Sunday

- 09.00: Peter Johnstone (Cambridge), ‘Remarks on punctual local connectedness’
- 09.30: Eugenia Cheng (Sheffield), ‘Iterated distributive laws via the Gray tensor product’
- 10.00: Nathan Bowler (Cambridge), ‘Composition in categories of games’
- 11.00: Olivia Caramello (Pisa), ‘A characterization theorem for geometric logic’
- 11.30: Nelson Martins-Ferreira (Leiria), ‘Remarks on two commutators’
- 12.00: Rudger Kieboom (Brussel), ‘More results on the categories of loops, of neardomains and of nearfields’
- 12.30: Jiří Adámek (Braunschweig), ‘Sifted colimits’

## Ninetieth meeting: Braunschweig, 24–25 April 2010

### Saturday

- 09.00: Andreas Döring (Oxford), ‘First steps towards non-commutative Gelfand duality’
- 09.30: Eugenia Cheng (Sheffield), ‘The universal loop space operad and generalisations’
- 10.00: Nick Gurski (Sheffield), ‘Iterating the icon construction’
- 11.00: Marek Zawadowski (Warszawa), ‘Combing trees as distributive laws’
- 11.30: Stanislaw Szawiel (Warszawa), ‘The web??? monoid and opetopic sets’
- 12.00: Julia Goedecke (Louvain), ‘Relative Mal’tsev categories’
- 14.30: Anders Kock (Aarhus), ‘Abstract projective lines as groupoids’
- 15.00: Reinhard Börger (Hagen), ‘Generalized ultrafilter functors’
- 15.30: Marta Bilkova (Praha), ‘Modalities that are adjoints’
- 16.30: Jiří Velebil (Praha), ‘Enriched local connections’
- 17.00: Daniela Petrisan (Leicester), ‘Algebraic theories over nominal sets’

### Sunday

- 09.00: Jiří Adámek (Braunschweig), ‘Finitary functors’
- 09.30: Diana Rodelo (Algarve), ‘Universal  $I$ -central extensions’
- 10.00: Tom Leinster (Glasgow), ‘Duality and the Pythagorean tensor’
- 11.00: Stefan Milius (Braunschweig), ‘Semantics of higher-order recursion schemes’
- 11.30: Daniel Schwenke, ‘CIA structures and the semantics of recursion’

## Ninety-first meeting: Amsterdam, 27–28 November 2010

### Saturday

- 10.00: Olivia Caramello (Cambridge), ‘A topos-theoretic approach to Stone-type dualities’
- 10.30: Steven Vickers (Birmingham), ‘Arithmetic universes as generalized spaces’
- 11.00: Jacob Vosmaer (Amsterdam), ‘Coalgebraic modal logic and the Vietoris powerlocale’
- 11.30: Stefan Milius (Braunschweig), ‘On rational fixed points of functors’

- 13.30: Sander Wolters (Amsterdam), ‘Topos theory,  $C^*$ -algebras and intuitionistic quantum logic’
- 14.00: Bas Spitters (Nijmegen), ‘Topos theory and quantum theory’
- 14.30: Paul Levy (Birmingham), ‘Fuzzy relations and quantales’
- 15.30: Luis Estrada (Groningen), ‘Complement-toposes: remarks on two potential criticisms’
- 16.00: Alexander Kurz (Leicester), ‘Presentation of endofunctors on categories with binding’
- 16.30: Tom Hirschowitz (Savoie), ‘Fair testing through must testing in a fair setting’
- 17.00: Jiří Adámek (Braunschweig), ‘Free corecursive algebras and monads’

**Sunday**

- 10.00: Wouter Stekelenburg (Utrecht), ‘From Grothendieck to relative realizability’
- 10.30: Tim van der Linden (Louvain), ‘The geometry of higher central extensions’
- 11.00: Giuseppe Metere (Milano), ‘Butterflies in semiabelian categories’
- 11.30: Marek Zawadowski (Warszawa), ‘coMalcev monads’
- 12.00: Marino Gran (Louvain), ‘A description of the fundamental group in terms of commutators and closure operators’

**Ninety-second meeting: Oxford, 23–24 April 2011**

**Saturday**

- 09.30: Olivia Caramello (Cambridge), ‘The topos-theoretic construction of Stone-type dualities’
- 10.00: Andreas Doering (Oxford), ‘Towards non-commutative Gelfand duality’
- 10.30: Bertfried Fauser (Birmingham), ‘The Born map for the topos qbit’
- 11.30: Samson Abramsky (Oxford), ‘Arrow’s Theorem by arrow theory’
- 12.00: Sergejs Solovjovs (Riga), ‘Categorically-algebraic topological theories’
- 12.30: Phil Scott (Ottawa), ‘Partially traced categories’
- 14.30: Marino Gran (Louvain), ‘A good theory of ideals in regular categories’
- 15.00: Jiří Rosický (Brno), ‘Abstract elementary classes and accessible categories’
- 15.30: John Bourke (Brno), ‘Pie, flexible and semi-flexible limits in 2-category theory’
- 16.30: Mehrnoosh Sadrzadeh (Oxford), ‘A compact categorical model for a logical distributional model of meaning’
- 17.00: Jamie Vicary (Oxford), ‘Higher categories and TQFTs’
- 17.30: Paul Taylor (), ‘Equiductive topology’

**Sunday**

- 09.30: Ignacio López Franco (Cambridge), ‘Compact coalgebras, daggers and Tannakian reconstruction’
- 10.00: Nick Gurski (Sheffield), ‘Codescent and Gray-monads’
- 10.30: Igor Baković (Split), ‘Bicategorical Galois theory’
- 11.30: Jiří Adámek (Braunschweig), ‘Colimits of monads’
- 12.00: Tim van der Linden (Louvain), ‘Higher central extensions and cohomology’
- 12.30: Paul Levy (Birmingham), ‘The double Eilenberg–Moore construction’

**Ninety-third meeting: Cambridge, 14–15 April 2012**

**Saturday**

- 09.15: Eugenia Cheng (Sheffield), ‘Multivariable adjunctions and mates’
- 09.45: Nick Gurski (Sheffield), ‘The Gray tensor product via factorization’
- 10.15: Igor Bakovic (IHES), ‘Fibrations in tricategories’
- 11.15: Dion Coumans (Nijmegen), ‘Generalizing canonical extension to the categorical setting’
- 11.45: Paul Taylor (), ‘Semilattice bases for locally compact spaces’
- 12.15: Benno van den Berg (Utrecht), ‘Predicative toposes revisited’
- 14.00: Tom Leinster (Glasgow), ‘The eventual image’
- 14.30: Michael Shulman (San Diego), ‘Euler characteristics of colimits’
- 15.00: Chris Heunen (Oxford), ‘Relative Frobenius algebras are groupoids’
- 16.00: Finn Lawler (Dublin), ‘Biprofunctors and biproarrow equipments’
- 16.30: Marie Bjerrum (Cambridge), ‘The closure of a class of finite limits by mixed interchange in **Set**’



## Sunday

- 09.00: Marek Zawadowski (Warszawa), ‘The theories of analytic monads’
- 09.30: Mike Stay (Auckland), ‘Compact closed bicategories’
- 10.00: Jamie Vicary (Oxford), ‘A 2-categorical formalism for quantum information’
- 11.00: Marino Gran (Louvain), ‘Weighted commutators in semi-abelian categories’
- 11.30: Tim van der Linden (Louvain), ‘The commutator condition for higher central extensions’
- 12.00: Nelson Martins-Ferreira (Leiria), ‘Topological space objects’
- 14.00: Jiří Rosický (Brno), ‘Rigidification of algebras over essentially algebraic theories’
- 14.30: John Bourke (Brno), ‘2-dimensional monadicity’
- 15.00: Daniela Petrisan (Leicester), ‘Relation lifting, with an application to the many-valued cover modality’
- 15.30: Jürgen Koslowski (Braunschweig), ‘A categorical approach to generating online machine models for formal languages from grammars’

## Ninety-fourth meeting: Sheffield, 25–28 March 2013

(combined with British Mathematical Colloquium)

### Monday

- 09.30: Julia Goedecke (Cambridge), ‘The fundamental group functor as a Kan extension’
- 10.00: John Huerta (Lisboa), ‘The categorified Poincaré supergroup’
- 11.00: Thomas Athorne (Sheffield), ‘When is the nerve–realisation adjunction comonadic?’
- 11.30: Christina Vasilakopoulou (Cambridge), ‘Enrichment of categories of algebras and modules’
- 13.00: Peter Johnstone (Cambridge), ‘Hyland + Gleason = Herbrand’
- 13.30: Paul Taylor (), ‘Overt subspaces of metric spaces’
- 14.00: John Baez (Riverside), ‘Bicategories and tricategories of spans’

### Tuesday

- 14.00: Nicola Gambino (Palermo), ‘The bicategory of operads is cartesian closed’
- 14.35: Dimitri Ara (Nijmegen), ‘Towards a definition of normalised lax  $n$ -functors’
- 15.15: François Métayer (Paris VII), ‘From word rewriting to higher categories’
- 15.50: Martin Hyland (Cambridge), ‘The fundamental theorem of the lambda calculus’

### Wednesday

- 14.00: Jon Woolf (Liverpool), ‘Whitney categories and the tangle hypothesis’
- 14.35: Tamara von Glehn (Cambridge), ‘Fibrations and polynomial functors’
- 15.15: Victoria Lebed (Paris VII), ‘Associative algebras, bialgebras and Leibniz algebras as braided objects’
- 15.50: Neil Ghani (Strathclyde), ‘Putting right that which we got wrong’

## Ninety-fifth meeting: Brno, 26–27 April 2014

### Saturday

- 09.30: Tim van der Linden (Louvain), ‘A Galois theory for monoids’
- 10.00: Christina Vasilakopoulou (Cambridge), ‘Monoids and modules in double categories’
- 11.00: Jiří Velebil (Praha), ‘Sound classes of weights and siftedness’
- 11.30: Matěj Dostál (Praha), ‘Morita equivalent  $S$ -sorted theories’
- 12.00: Panagis Karazeris (Patras), ‘Flat morphisms of theories’
- 14.30: Carles Casacuberta (Barcelona), ‘About homotopy algebras for a monad’
- 15.00: Ahmet Emin Tatar (King Fahd), ‘Extensions of Picard 2-stacks and their classification’
- 16.00: Tamara von Glehn (Cambridge), ‘Constructing categorical models of type theory’
- 16.30: Henrik Forssell (Stockholm), ‘Constructive completeness and Joyal’s theorem’
- 17.00: Michael Makkai (McGill), ‘Logic with dependent types: first order and second order quantification’

### Sunday

- 09.30: Lurdes Sousa (Viseu), ‘On classes of morphisms determined by Kan-injectivity’
- 10.00: Sergejs Solovjovs (Brno), ‘On a lax-algebraic characterization of closed maps’
- 10.30: Alex Corner (Sheffield), ‘Tensoring braided strict monoidal categories’
- 11.30: Javier Gutiérrez (Nijmegen), ‘Solid and rigid monoids in monoidal categories’
- 12.00: Andy Tonks (London Metropolitan), ‘Decomposition spaces: (Higher) categorification of incidence coalgebras and Möbius inversion’

## Ninety-sixth meeting: Palermo, 11–12 October 2014

(celebrating the sixtieth birthday of Pino Rosolini)

### Friday

15.00: Aldo Ursini (Siena), ‘Ideal theory in categorical and universal algebra: an update’

15.30: Nelson Martins-Ferreira (Leiria), ‘Internal reflexive graphs with respect to pointed endofunctors’

16.00: Lurdes Sousa (Viseu), ‘Towards a calculus of fractions concerning Kan-injectivity’

### Saturday

09.30: Martin Hyland (Cambridge), ‘Finitary polynomials’

10.00: David McCarty (Indiana), ‘What is logical truth?’

10.30: Zurab Janelidze (Stellenbosch), ‘Normal categories and duality’

11.30: Dominique Bourn (Calais), ‘A conceptual approach to nilpotent objects in the Mal’cev context’

12.00: Maria Manuel Clementino (Coimbra), ‘On the representability of actions for topological algebras’

12.30: Tim van der Linden (Louvain), ‘Algebraically coherent categories: definition, examples and basic properties’

15.00: Marcelo Fiore (Cambridge), ‘On the functional representation of abstract clones’

15.30: Jonas Frey (Paris-Diderot), ‘Enriched Pitts functors as a framework for iteration and factorization of realizability and sheaf constructions’

16.00: Samuele Maschio (Padova), ‘Models of IZF in subtoposes of nested realizability toposes’

16.30: Emilia Maietti (Padova), ‘Categorical structures for the foundation of constructive mathematics’

17.30: Manuela Sobral (Coimbra), ‘Some remarks on descent for Priestley spaces’

18.00: Matěj Dostál (Praha), ‘Characterizing sifted weights’

18.30: Alex Simpson (Edinburgh), ‘The random topos’

### Sunday

09.00: Marino Gran (Louvain), ‘Quandles, closure operators and factorization systems’

09.30: Paige North (Cambridge), ‘Moore factorization systems’

10.00: Federico Orsanigo (Strathclyde), ‘Fibrational parametricity’

11.00: Edmund Robinson (Queen Mary), ‘Type structure and logical relations’

11.30: Joachim Kock (Barcelona), ‘Point-free topology and Hochster duality in derived categories’

12.00: Diana Rodelo (Algarve), ‘A criterion for reflectiveness of normal extensions with an application to monoids’

12.30: Steve Lack (Macquarie), ‘Antipodes’

## Ninety-seventh meeting: Louvain-la-Neuve, 31 January–1 February 2015

(celebrating the sixty-fifth birthday of Rudger Kieboom)

### Saturday

09.30: George Janelidze (Cape Town), ‘Historical remarks on internal object actions and action representability’

10.00: Tim van der Linden (Louvain), ‘When is a double central extension *universal*?’

10.30: Jiří Adámek (Braunschweig), ‘Colimits of monads’

11.30: René Guitart (Paris VII), ‘Algebraic structures over Autograph’

12.00: Karen van Opdenbosch (Brussel), ‘Regularity for relational algebras and some examples’

12.30: Walter Tholen (York), ‘Topological categories, quantaloids and total cocompleteness’

15.00: Stefaan Caenepeel (Brussel), ‘Hopf categories’

15.30: Giorgio Trentinaglia (Lisboa), ‘Reduced smooth stacks?’

16.00: Pierre-Alain Jacqmin (Louvain), ‘Exactness properties and cofiltered limit completion’

17.00: Nick Gurski (Sheffield), ‘Invertible objects in braided monoidal categories’

17.30: Tom Leinster (Edinburgh), ‘The Euler characteristic of an associative algebra’

### Sunday

09.00: Enrico Vitale (Louvain), ‘Gabriel–Zisman and Brown exact sequences for internal groupoids’

09.30: Giuseppe Metere (Palermo), ‘Extension theory and the calculus of butterflies’

10.00: Benjamín Alarcón Heredia (Granada), ‘Bicategorical homotopy pullbacks’

- 11.00: Rory Lucyshyn-Wright (Cambridge), ‘Completion, closure, and density relative to a monad, with examples in functional analysis and sheaf theory’  
 11.30: Tom Avery (Edinburgh), ‘Codensity and the Giry monad’  
 12.00: Daniel Sch appi (Sheffield), ‘Universal geometric tensor categories’  
 12.30: Rudger Kieboom (Brussel), ‘KT-fields and sharply 3-transitive groups’

### Ninety-eighth meeting: Doorn, 9–10 January 2016

#### Saturday

- 09.30: Thomas Streicher (Darmstadt), ‘Spectral theory for effects from the point of view of computable analysis’  
 10.15: Frank Roumen (Nijmegen), ‘Cohomology of effect algebras’  
 11.30: Bas Spitters (Aarhus), ‘Cubical sets as a classifying topos’  
 12.15: Simon Henry (Coll ege de France), ‘Operator algebras from toposes’  
 15.00: Joost Nuijtem (Utrecht), ‘Minimal fibrations in Reedy-like model categories’  
 15.45: Gijs Heuts (K obenhavn), ‘Goodwillie towers of categories’  
 17.00: Roald Koudenburg (Utrecht), ‘A double-dimensional approach to formal category theory’  
 17.45: Emily Riehl (Johns Hopkins), ‘A model-independent calculus of pointwise Kan extensions for  $\infty$ -categories’

#### Sunday

- 09.30: Peter Lumsdaine (Stockholm), ‘Blow-up arguments for independence results in toposes’  
 10.15: J urgen Koslowski (Braunschweig), ‘**Cat** is linearly distributive in several different ways’  
 11.30: Ji r ı Ad amek (Braunschweig), ‘Profinite monads’

### Ninety-ninth meeting: Braunschweig, 12–13 March 2016

(Marking the retirement of Ji r ı Ad amek)

#### Saturday

- 09.20: Lars Birkedal (Aarhus), ‘Guarded recursion and type theory’  
 10.00: Tom Leinster (Edinburgh), ‘In search of the spectrum’  
 10.30: Maria Manuel Clementino (Coimbra), ‘Lax orthogonal factorizations on **Ord**-enriched categories’  
 11.30: Manuela Sobral (Coimbra), ‘On some categorical-algebraic conditions in  $S$ -protomodular categories’  
 12.00: Marino Gran (Louvain), ‘Beck–Chevalley condition and Goursat categories’  
 12.30: Henning Urbat (Braunschweig), ‘Algebraic language theory = Monads + Duality’  
 14.30: Tadeusz Litak (Erlangen), ‘Guarded Conway theories and guarded traces’  
 15.00: Lutz Schr oder (Erlangen), ‘Unguarded corecursion on coinductive resumptions’  
 15.30: Tarmo Uustalu (Tallinn), ‘Dynamic programming: coalgebras and comonads’  
 16.30: Ji r ı Rosick y (Brno), ‘Accessible categories and inaccessible cardinals’  
 17.00: Ji r ı Ad amek (Braunschweig), ‘Terminal coalgebras of **Set**-functors’  
 17.30: Walter Tholen (York), ‘Ji r ı Ad amek — a biased categorical synopsis’

#### Sunday

- 09.30: Giuseppe Metere (Palermo), ‘Comprehensive factorization and “internal” crossed profunctor composition’  
 10.00: Lurdes Sousa (Viseu), ‘KZ-monadicity and its logic’  
 10.30: Rory Lucyshyn-Wright (Mount Allison), ‘Commutants for enriched algebraic theories and monads’  
 11.30: Walter Tholen (York), ‘Lax distributive laws for topology’  
 12.00: Ingo Blechschmidt (Augsburg), ‘Using the internal language of toposes in algebraic geometry’  
 12.30: Paul Levy (Birmingham), ‘Final coalgebras from corecursive algebras’

## Hundredth meeting: Cambridge, 21–22 May 2016

### Friday

17.30: Dana Scott (Carnegie–Mellon), ‘Why mathematical proof?’

### Saturday

09.15: Harold Simmons (Manchester), ‘The Gabriel dimension of a module has nothing to do with the category in which it lives’

09.45: Jiří Rosický (Brno), ‘Cotorsion theories in locally presentable abelian categories’

10.15: Benno van den Berg (Amsterdam), ‘Exact completion of path categories’

11.15: Andy Pitts (Cambridge), ‘Cubical sets axiomatised in the internal type theory of a topos’

11.45: Filip Bar (Cambridge), ‘Infinitesimal models of algebraic theories’

12.15: Matías Menni (La Plata), ‘Every sufficiently cohesive topos is infinitesimally generated’

14.15: Dana Scott (Carnegie–Mellon), ‘Stochastic lambda-calculus’

14.45: Christian Espindola (Stockholm), ‘Completeness of infinitary intuitionistic logics’

15.15: Jaap van Oosten (Utrecht), ‘Classical and relative realizability’

16.15: Samuele Maschio (Padova), ‘A strictly predicative variant of Hyland’s effective topos’

16.45: Thomas Streicher (Darmstadt), ‘Moral triposes giving rise to Grothendieck toposes’

17.15: Guilherme Lima (Cambridge), ‘Pullbacks of essential inclusions of Grothendieck toposes’

17.45: Peter Johnstone (Cambridge), ‘Flat-maximal and flat-minimal sublocales’

### Sunday

09.00: Jiří Adámek (Braunschweig), ‘A logic of KZ-monadic categories’

09.30: Steven Vickers (Birmingham), ‘Sketches for arithmetic universes: infinitary disjunctions in finitary form’

10.00: Giuseppe Rosolini (Genova), ‘Frames as topological algebras’

11.00: Tim van der Linden (Louvain), ‘A Seifert–Van Kampen theorem in non-abelian algebra’

11.30: Joachim Kock (Barcelona), ‘Faa di Bruno for operads’

12.00: Zhen Lin Low (Cambridge), ‘Categories of spaces built from local models’

12.30: Ieke Moerdijk (Utrecht), ‘Shuffles of trees’