International Conference: Grothendieck's Mathematical and Philosophical Legacy Chapman University, Orange (CA) — Beckman Hall, Room 106 May 24<sup>th</sup>-28<sup>th</sup>, 2022

## 24th Tuesday

8:45 - 9:00 Welcome by Michel IBBA, dean of the Schmid College of Science and Technology

- 9:00 10:00 Marco Panza (Chapman, CNRS) Grothendieck's promenade, or the eulogy of aloneness: an introduction to Grothendieck's spirit by his own words
- 10:00 11:00 Fernando Zalamea (Univ. Nacional de Colombia): A Unitary Vision of Grothendieck's 40 Main Years (1951-1991): The Models TSK (Topos of Sheaves over Kripke Models)
- 11:00 11:15 Coffee Break
- 11:15 12:15 Kevin Buzzard (Imperial College London; by zoom): Grothendieck's approach to equality
- 12:15 1:15 Jean Pierre Marquis (Univ. of Montréal): Grothendieck, Bourbaki and mathematical structuralism

1:15 – 2:30 Lunch

2:30 – 3:30 Colin McLarty (Case Western Reserve Univ.): Grothendieck did not believe in universes, he believed in topos and schemes

3:30 – 4:30 Eileen Landy (UC Davis): As If Category Theory Were a Foundation

4:30 - 5:30 Jean-Jacques Szczecinairz (Univ Paris Cité): On some points of homological algebra

### 25th Wendesday

9:00 - 10:00 John Baez (UC Riverside): Motivating Motives

10:00 – 11:00 Simona Paoli (Univ. of Leicester; by zoom): *From higher groupoids to higher categories* 11:00 – 11:15 Coffee Break

11:15 - 12:15 Brice Halimi (Univ. Paris Cité): Context-dependence and descent theory

12:15 – 1:15 Goro Kato (Cal Poly): The Descent Methods for Phenomena of Organization-Emergence

1:15 - 2:30 Lunch

2:30 – 3:30 Jessica Carter (Aarhus Univ.): Grothendieck's contribution to K-theory and some consequences for the ontology of mathematics

3:30 – 4:30 Frederic Jaeck (Univ. of Aix-Marseille): A philosophy in the shade of Grothendieck's mathematics 4:30 – 5:30 Carmen Martinez (UNAM): Conjectures, counterexamples and A. Grothendieck

7:00 Gala Dinner at the Chapman President Residence

### 26th Thursday

9:00 - 10:00 Ahmed Sebbar (Chapman) Euler's Products

10:00 - 11:00 Yves Adré (Sorbonne Univ., Paris; by zoom): Grothendieck and differential equations

11:00 – 11:15 Coffee Break

11:15 – 12:15 Daniele Struppa (Chapman): Superoscillatory Sequences and Infinite Order Differential Operators 12:15 – 1:15 Mohamed Saidi (Univ. of Exeter): The anabelian geometry of Grothendieck

1:15 - 2:30 Lunch

2:30 – 3:30 Pino Rosolini (Univ. of Genova): Grothendieck fibrations, or when aesthetics drives mathematics 3:30 – 4:30 Simon Henry (Univ. of Ottawa; by zoom): Grothendieck's homotopy hypothesis 4:30 – 5:30 Drew Moshier (Chapman) On "logical" dual of compact Hausdorff Spaces

6:30 Conference Dinner in Old Orange

## 27th Friday

- 9:00 10:00 André Villaveces (Univ. Nacional de Colombia): Galoisian model theory: the role(s) of Grothendieck (à son insu !)
- 10:00 11:00 Olivia Caramello (Univ. of Insubria; by Zoom): The "unifying notion" of topos
- 11:00 11:15 Coffee Break
- 11:15 12:15 Mike Shulman (Univ. of San Diego): Lifting Grothendieck universes to Grothendieck toposes
- 12:15 1:15 José Gil-Ferez (Chapman Univ.) The Isomorphism Theorem of Algebraic Logic: a Categorical Perspective
- 1:15 2:30 Lunch
- 2:30 3:30 Oumar Wone (Chapman) : Vector bundles on Riemann surfaces according to Grothendieck and his followers
- 3:30 4:30 Claudio Bartocci (Univ. of Genova): The inception of the theory of moduli spaces: Grothendieck's Quot scheme
- 4:30 5:30 Christian Houzel (IUFM de Paris): Riemann surfaces after Grothendieck [presented by J.J. Szczeciniarz]

# 28th Saturday

- 9:00 10:00 Silvio Ghilardi (Univ. degli Studi, Milano): Investigating definability in propositional logic via Grothendieck topologies and sheaves
- 10:00 11:00 Matteo Viale (Univ. of Turin; by zoom): The duality between Boolean valuated models and topological presheaves
- 11:00 11:15 Coffee Break
- 11:15 12:15 Benjamin Collas (Kyoto Univ.): Galois-Teichmüller: arithmetic geometric principles
- 12:15 1:15 Closing: general discussion animated by Alex Kurz (Chapman)