

# Reading Seminar 2023 Spring: Global Kuranishi Charts

March 26, 2023

## 1 Global Kuranishi Charts and its topology in $\mathbb{Q}$ -coefficients

- Definition of global Kuranishi charts and smoothing theory (Weiwei Wu)
- Orientations of virtual bundles and Kuranishi charts. Thom isomorphisms, Atiyah duality. Equivariant cohomology in  $\mathbb{Q}$ -coefficients and duality therein. Pushouts of classes in global Kuranishi charts. (Sketch of the construction of VFC in  $\mathbb{Q}$ -coefficients). (Hansol Hong)

## 2 Moduli space of rational curves

- Moduli space of genus zero closed curves. Description of a chart in this case: framed curves, induced topology of the moduli space. (Zhengyi Zhou)
- Gromov's trick, linearization, peak sections, gluing (Section 6.3-6.8). (Zhengyi Zhou)
- Incorporating marked points and invariance under different choices. Conclusion of the construction of VFC. (Jun Zhang)

After these preparations, we will either attempt to understand the main theorem of Abouzaid-McLean-Smith or Bai-Xu's integral-valued Gromov-Witten invariants, depending on interests. Please feel free to volunteer if there are topics you are interested in.