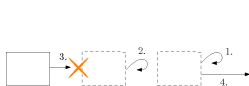# applications *fraud*

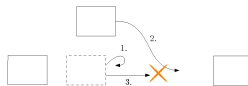## introduction to *network analysis* (*ina*)

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spring 2020/21

fraud *insurance*

— *staged* *traffic accidents* with *false insurance claims*
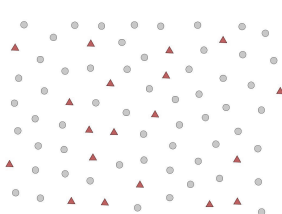— common characteristics of *staged crash schemes*
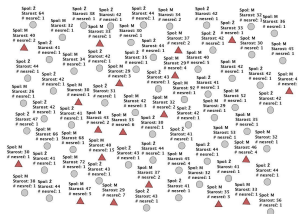

swoop & squat   drive down

— $\approx 10\%$ of insurance claim outcome due to fraud
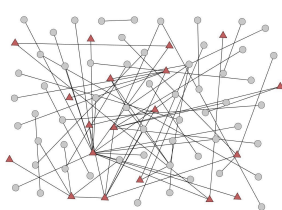— $\approx 100 \ \text{million} \ €$ yearly loss in Slovenia due to fraud

fraud *detection*

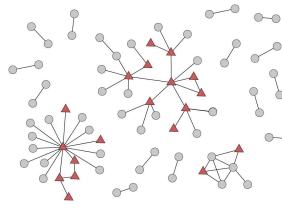
1. *fraudulent participants* in traffic accidents

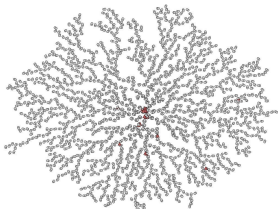2. *analysis/mining* of *participants metadata*

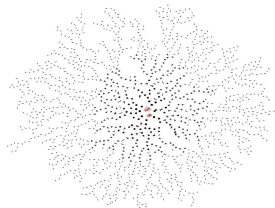3. *participants collaboration* as *social network*

4. *suspicious participants* visible by *naked eye*

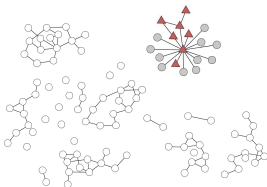* participants metadata from semi-structured police records
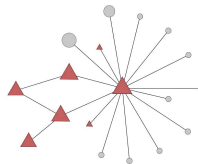
fraud *system*

1. *drivers*, *passengers* & *witnesses network*

2. *network connectivity* around *critical point*

3. *suspicious components* by *link rewiring*

4. *suspicious participants* by *link analysis*

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†≈ 1500 accidents in Slovenia from period 1999-2008 [ŠFB11]

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