Overview:
1. Dynamics in composition
2. Position, cohesion, viability and ambition
Composition of PNA

1. Algorithms, Combinatorics and Optimization (PNA1)

2. Probability and Stochastic Networks (PNA2)
   • merger in 2006

3. Signals and Images (PNA4)
   • moved to the SEN cluster in 2010

4. Cryptography (PNA5)
   • started as a pilot in 2004

5. Algorithms and Complexity (PNA6)
   • joined PNA in 2010

Flexibility: dynamic group structure in response to new challenges and opportunities
Position of PNA

Mixture of fundamental / curiosity-driven research and research motivated by applications

Strong contribution to all four research themes
- societal logistics
- data explosion and learning
- life sciences
- software as service

Broad international network of contacts, both in academia and industry
Cluster structure facilitates **new** and **multi-disciplinary** research lines

Collaborations with CWI-groups outside of PNA: SEN1, SEN3, SEN4, MAC4
Viability of PNA

• All groups are internationally leading and visible
• All groups obtain prestigious research grants
  e.g., Spinoza, ERC, VICI 3x, VIDI 4x, VENI 6x, Sofya Kovalevskaya grant, NWO Free Competition 12x, NSF, ESF
• All groups are financially sound
• Senior staff is talented and relatively young
• All groups are well-imbedded in internal and external communities and contact networks
• Flexibility: fast turn-over of group and cluster leaders
• Ample possibilities for multi-disciplinary research, many collaborations within and outside of CWI
Ambition

- **Secure and expand** internationally leading positions of the individual groups
- Expand activities in the context of the **research themes** societal logistics, life sciences, data explosion and software as service
- Increased focus on **cross-fertilizing** our shared knowledge on fundamental mathematics