Introduction

The conference is opened by N. Aveline who welcomes and thanks participants, honored of the presence of high representatives of SYSU and of the French government. She thanks the support of the EU and recalls that the Medium aid is not only academic, but also a tool to enhance dialogue, through stakeholder workshops for example. The feedbacks of experiments within three cities will be given during the roundtable. It also yield the signing of cooperation agreements between Chinese and European universities.

Xiao Haipeng, vice-president of SYSU

Xiao Haipeng greets everyone and recalls the history of SYSU. The university has currently 4 campuses, and soon a 5th campus in Shenzhen. Very much efforts are done to exchange ideas with the world, and it is positioned as a world class university. For the urban issues in China such as traffic congestion and pollution, the study of sustainability is becoming increasingly important. In Pearl River Delta one tenth of National GDP is produced, but urban agglomeration also brings new challenges, that some were already encountered in Europe. He wishes great success to the partnership between SYSU, CNRS and other consortium members within this project.

Bertrand Furno, Consul General de France

(In French) The consul welcomes everyone and is honored to open such a colloque. He thanks SYSU for the importance they give to the event, through the presence of the vice president. He recalls the urban issues China is facing, with the acceleration of urbanisation and the emergence of mega-cities, inducing the largest rural-urban migration in the world and strong unbalances. International experts can help therein, as with the 1000 talents programme. France and Europe are supposed to be able to bring expertise in green urbanism, eco-construction, which will be the next theme of the French-Chinese month. Exchanges between researchers are more important than ever to bring future solutions.

Laurent Bochereau, EU Representative in China

Thanks everyone. EU-China long history of diplomatic relathionship (40years) : peace, economy, people to people. Science a bit later, recently upgraded : innovation cooperation (last week third meeting). Conditions for innovation : how to promote, funding mechanisms. Open Science, Open Policies ; more entreupreunership. Urbanisation hot topic. Flagship collaboration. More mobility to China : very low number of Europeans young researchers. Clean energy, food and agriculture. Intensify relationships between Universities.

Urbanisation : key point. Sustainable urbanisation partnership (5 years ago). Initiatives, cities on both sides. Conference in Foshan, precursor. Platform : Urban EU-China ; at different levels, from States to cities. Exchange of best practices. Last call for Horizon2020 ; many topics in urbanization, with participation of China. Ex. Nature-based solutions for restoration of urban systems ; water cleaning. Conclusion : urbanisation key priority. Seems very good research.

Yongjie Li, Chief Planner, Department of Housing and Urban-Rural ?

Welcomes. New phase of dvlpmt of cities in CHina, biggest challenge is sustainibility. rapid growth, expansion. sprawl not sustainable, running out of ressources, social problems. Conference focused on industries. Production and ecology in Urban Planning. Participative planning. National governement assigned high proiority. results should be put into practice. Original masterplan. 2010 : learn from EU/Meiguo, river network to conserve natural ressources, provide more space to residents for leisure and entertainement. 2016 : lead in conservation. Cultural activities, raise public awareness.

Today important international conf. in Sysu. Opportunities by one belt one road initiative.

Desheng Xue, Dean of School of Geography

Greetings on behalf of DiliKexuexueyuan. (courageous with the weather). Presents School of Geography and Planning. 4 dpts. Planning in PRD, Guangdong, and other areas in China. 1921 fundation of geo in Sysu, always international collaborations. Many projects, waits forward. Wishes good luck.

Chunshan Zhou, coordinator of Medium in Sysu

Greetings. Pleasure to have everyone here. Zhuhai, Zhuhai campus. ZHuhai planning bureau great support. Very robust research, progresses in Chinese. Thanks participants, joigning the conf ; feedback on topics. Next year Datong, new beginning of further collaborations. Wishes good conf. and good stay in Guangzhou.

Keynote : Zhou Suhong, Spatio-temporal behavior and the Smart city

Smart city reshaping daily life. New smart transportation. New way of communication. Big Data : Multi-scale, Real time, Individual, Tracking Data. Example : GPS tracking data and dynamic of the city. Real time route planning. Economic : e-commerce, intelligent industry, sharing economy. ex TMall 120Billion rMB on Nov 11th 2016. New era of transformation, new challenges. Example of crowded of sharing bikes in Shenzhen: was the government ready ? Example of changing of regulation mode : Government -¿ Urban Affaire -¿ Company -¿ Public Delegation of service for sharing bikes, plus role of public : giv. short of regulatory tools, short of information. New mode of cooperation, public participation and Self-regulation. Higher level for the company. New PPP (Public Private Participation Mode). 1990 : Single Functional Service -¿ 2000 Some integrated service -¿ 2015 Smart city, coordinated participation. How can research support coordinated participatory administration, personalized service in the new era. Framework : VGI... . Main topics in Geography, TranportationLandUse, GIS COmputer Science : in time, increase in trajectories, big data. Main research fields : Agglomeration and Clustering in Time and Space :Patterns ; correlation and distance attenuation : Spatio-temporal Correlations (Near repeat, Distance decay, colocation) ; Processes and Dynamics.

Examples of research : Transportation / mobility. Superposition of different needs of mobility : superposition of different processes. Case study in Shenzhen : Taxi's GPS records : O/D ; fit gradient decay

Behavior-based Urban research : social geography + spatio-temporal trajectories. : cluster at different places in daily lives ; segregation (// travail Julie) Zhou 2015.

Real-time Modeling.

Urban security and Public Health. : Polices-criminal interactions ; patients-infectious disease : interactions in space and time. → Spatio-temporal hotspot analysis and forecast models. MAS for criminology behavior (example Netlogo).

Summary : (i) SMart city reshaping daily life ; (ii) Big Data ; (iii) New modes of public administration ; (iv) New research.

(Natacha) thanks for sharing theoretical and empirical results.

Round Table : Feedback from Stakeholder Workshops

This round table aims to give a feedback on organized training workshops. The three main steps were training students, support them to organize, and collect output from the workshops. The context is participative planning, which aims at gathering different people having responsibilities in Urban Development.

The first point to raise concerns the recruitment process.

V. Anzoise Experience in Hangzhou. HZNU only recently implanted. To recruit, trust relationships. First workshop : not very local stakeholders ; Second : rely on 6month of fieldwork. Incremental recruitment.

Shi Chenyi For the Zhuhai stakeholder workshop : how to choose, how to convince. Topic : sustainibility of Hi-Tech zone. Organisation where know people ; others meet directly. How to convince : topics, brainstorm. Other had to situate the context. Difficult to recruit people from the community.

(Zhuhai Planning Instiute) Importance of workshop. Forums in which they are interested in. Official wechat account. Wider def of stakeholders. Structuring of the zone ; suggestions.

(Judith) In Datong. Very interesting because not only students (no research in Datong). Halfway workshop/training. Prof. Chen very good Guanxi. Officials : members of planning Bureau, responsible for financing. University located near to new gov. building.

(Erik) Dialogue beyond the community : different scales of participative dialogue brought together. What did they gain from the workshop ?

(Judith) difficult because Datong just happened. People could stay all the time : other dimension than content (new notions : participative, sustainibility) bu method : bringing people together from different background, unconventionnal, brainstorm, mixed social groups. Concrete organisation impact. (Erik) Pedagogical skills learnt : carry out a meeting in an other way. How to relate to other in a very general way.

(Valentina) People not trained before. Diverse results. Notion of ressource. Even if people interested in the approach, who takes the responsibility in the end, to go further.

(Erik) New type of questioning : do we have governance needed ?

(Valentina) Second workshop, follow-up. Swot : built a little bit more, settle wechat group, but nobody takes the responsibility : who has to lead ? in the end, nobody goes on with what emerged.

(Erik) Not mandated, only showing where could go. Zhuhai planning institute : Chenyi, dialogue ?

(Chenyi) People from different backgrounds, different perspectives. Difficult to find common topics : guy speaking only of the achievment of HighTech zone. Sone people gave wrong information.

(Planing Institute) Very honored to be part of workshop. Teaches methods and approaches to facilitate public participation. Similar to community planning model ; different from traditional planning. Lack of parking space / public space / public road network. Questions and issues brought by residents as third party : use professional knowledge to look into this issue. Issues more urgent. Projects under way, already results. Draw experience in the future : replicable model ?

(.) WOrkshops in Xiamen. "Build Together workshop". Most important places. Placemking to begin workshop. Open place provided by governement. People become local community planners. What can the community be ? What they care about has been solved. Between governement and community. What can planners bring to community to be better.

(Sabine) Interest in OpenNess. Judith ?

(Judith) Adapted a lot methods for Datong. Context : very important geo, socio-economic situations. Datong : self-interrogation, no more ressource-based economy. Uncertainty towards the future, no plan for the future. Diverse paths possible to follow.

(Valentina) In Hangzhou, a bit different. Counter-example ? New area, not implemented, should be open ? Actually the opposite, issue was overplanning. People important did not participate. Even feedback. Don't want to question solution already designed ?

(Weilang Zhang) People affected ? difficult to involve community ?

(Sabine) Perceptions of China ; comparison with experience Nicolas ?

(N Douay) Collaborative approach dominant in western planning theory ; but gap between theory and practice. Issues to make collaboratoin effective. Very top-down in China (history or political). recently, for social accessiblity, public participation got more attention from gvt. Ex exhibition : collaborative centers. Participatory budgets in some cities. But limited to basic info. Technical device ? (online mobilisation). technical question at the beginning ; design of device will define and limite the scope of

participation. Ex. Changdu//Paris (participatory budget). Such workshop develops meaning for actors of cities. Well organized, // literature : who ? Deliberation ? Why ? (impact of the decision) Many issues shared with China.

(Erik) why did not see communities in Zhuhai ?

(Planning Institute) Coordinating resident to join, coordinate with person in charge of community. What to do ? coordinate with gov. What to do and how. leverage neigh community. Now wechat account. Neigh commitee brought a lot. Did answer good ?

(Erik) Complex cities need something higher. bringing all responsible at a higher level.

(Planning Institute) Meeting with companies : adapts to local needs (implantation of utilities).

(Valentina) Add something to this : coincide with a district. [not true!] Other activities than the companies. People thought "not qualified enough". Representative contacted back : cf informal meeting ; people preserving the area. Just connect the dots.

(Erik) Opens to the floor

Question Different actors may have diverging interests. How did you manage potential conflicts ?

(Chenyi) They were conflicts : man saying Zhuhai facing aging problems, disagreed why support aging industry ; did not come to common point because of time.

(Erik) Not solving conflicts, but taking notes of it, find a way to move forward.

(Judith) Role of moderators : difficult for students.

(Valentina) Big players too big : one redirects totally, puts interests of his company.

(Q : Yinghao) comment : conflict of visions : preferences, but no conflicts of need, as one can see in Europe. Lack of competence of hightech zone to attract educated people ? But don't want, because would be raising prices. Everybody knows the problem but does not see it as conflict question.

(Erik) Observation of an issue (ex real estate), how to tranform into a strategy. Issue of dialogue. Level of abstractness to address these processes ?

(Q ?) Sharing interest among all cities : same direction ?

(Judith) Hard to answer. Paradigm of Medium-sized cities : want to become large. Datong very specialized, but paradigm of dvlpmt not redifined.

(Erik) Pb of ressources. Intuitions emerging in short dialogues.

(Q Daniele Venice) Urbanisation is key in modernisation - workshop to discuss this kind of question ?

(Valentina) Cultural Heritage issue. Not really emerged as a reflexion there. Issue for people : present in their agenda, but not in workshop.

(Erik) and in Datong with tourism ?

(Datong) Devaluate daily life, but think in mass tourism (although practice alternative activities - hiking).

(Sabine) example on how difficult to overcome sectorial differences.

(Q : ? Wuhan University) Preparation stage : what documents prepare, people speak of the same thing. In Whuhan, application. maps, 3D models etc.

(Q : ?) Participatory planning important in China. Purpose not only to know their need, but also their willingness to pay.

(Valentine) Preparation of materials : first prepare for organizers. Follow-up in Hangzhou. first workshop basic : knowledge brought by people. Second : maps, Swot

(Erik) Objective : invite more informed people, some with certain competences in fields. 2 Q : financing.

(Valentina) Ex second Hangzhou. Involving companies.

(Erik) Focus not on wishlist, but three pillars of sustainability. how economy balances social and environmental needs. Last comments ?

(Planning Zhuhai) Who pays ? how put in action ? what they care about most. Already survey in Xiangzhou : district gov. already gives money for community planning. Local Commities uses fundings

to renovate. Activities ? Fund called beautiful three corners, to renovate community. For participatory planning, provide local people and leverage funds provided by gov.

(Erik) Shred experience important. More emerging questions than answers : how to move on dialogue : levels, plans and approaches, relation with govt ; construct more robust, better policies. Some authorities more receptive than others. Thanks the panelists, the audience, continue discussion later these days and the coming.

(Natacha) Thanks for chairing - tomorrow 9.

Session : Spatio-temporal Behavior in Complex Systems

D. Pumain, UMR Gographie-cits - The SimpopLocal model

The Evolutive Urban theory introduces rather simple models, but with the hope that they will informe concrete problems one day. It was the first time agent-based models were actually validated in a robust way. Archeological works reconstructing the population in Henan more than 2000 years ago shows that settlements already had a strong spatial structure and a hierarchy, typically a log-normal distribution of settlement sizes. To reproduce such stylized facts is the objective to multi-agents models of the Simpop series. The first one was introduced in 1996, and could reproduce basic stylized facts, but parameters values were mostly uncertain. Later many models were constructed within the Evolutive Urban Theory, of which the latest is the Marius model by Cottineau.

This presentation focuses on the SimpopLocal model, in which agents are stabilized settlements. The novelty compared to Simpop2 is that the creation os innovation is endogenous, and propagated between settlements. A logistic model of growth is used, the ressource being a function of innovation, and spatial interactions are translated with a gravity model. Some parameters are abstract cannot be extracted from data, and the use of intensive computation with the specifically designed software OpenMole is necessary. The principle of the OpenMole platform for this application is to define calibration objectives and to find optimal parameters to fit the data according to these objectives, in particular the distribution of settlement sizes. The use of genetic algorithms on a computation grid allowed a significant qualitative leap in results. The progressive hierarchization of a synthetic settlement illustrate the dynamics of the model. The variation domain for the estimated parameters was significantly reduced through calibration. A specific method, the Calibration Profile, allows to determine sufficient parameters to obtain the emergent patterns, and allows to suppress unnecessary parameters : in the SimpopLocal model, the lifetime of innovation is in fact not needed.

For the first time, necessary and sufficient conditions for such a simulation model to reach certain objectives were obtained, and the model was validated. Main pillars of the Evolutive Theory will be further explored with similar methods, namely (i) the hierarchical differentiation emerging from competition between cities ; (ii) the persistence of hierarchies, despite local fluctuations in sizes ; and (iii) the functional diversity in the geographical space emerging from innovation waves.

Three main stages can be found in the history Urban dynamics : the agrarian economy, with a preponderance of local ressources, captured by the SimpopLocal model ; the market economy and the role of network returns (SimpopNet model) ; and a forthcoming phase which should imply Knowledge economy and Environmental intelligence. The co-evolution of cities can yield new modes of cooperation, although differences between cities are part of dynamics of the system.

Question What is the sample size used for the simulations ? → It stays a pure theoretical model, the parameters values obtained should be tested in a way by archeologists. Concerning sample size, the simulation can imply thousands to millions of models simulations.

Question I. Polli Are the optimisation multi-objective, and were the plots Pareto fronts ? → yes

Zhan Qingming, - Urban Wind path analysis

With climate change a key issue for hot cities is that they that get warmer. Wuhan is one of such hotspots. One can ask the question why are some cities hotter ?

Background   Urbanization accelerating process. not environmental friendly (air conditioners), up to health issues. Cities as "pancake making" : superposing layers.

Graph : Wuhan temperature, with confortable region. if bring nature in city centers, increase confirtable zone without use of conditioners, and reduce pollution. Incoming issue as size will go bigger.

Framework   Phenomenon → Analysis → Planning → Implementation.

Thousands of stations in one city ; hourly : big data.

Open data : Landsat, etc.

Use of Weather and Forecasting model. Spatial analysis : frontal area index.

Wind speed as function of height because of buildings. roughness.

Case study   Wuhan, and Fuzhou (hotest city).

plot : frequency as function of speed and direction ; and temperature. Distribution of directions depends of season.

Topography. Land SUrface Temerature. Fuzhou surronded by 100m high mountains.

Teperature changes in time, situation getting worse.

Winf roses at each station.

Front Area Index : where wind can break through.

Results : Wind path mapping. Different types of wind. See breeze. River as windpath. : find potential air paths. (first, second level).

Ventilation potential analysis for current and planned road. Width of road larger if not only transportation function. plus orientation. problem orientates solution.

Sample examples of suggested improvement : Avoid big blocks, put in direcion.

Planning implementation : small steps. Control, give planning guidelines.

Conclusion   Heterogenous data and simulation tools : more scientific approach to planning to make the city greener and more confortable.

Limitations : link between levels.

Planning and Design.

Question (ZH)   Large area, lot of buildings destroyed, done only in theory, how to incorporate in practice without demolishing ?

→ demolition is the last step. Three step process. Should be demolished ? One example in Hong Kong : wind can go through building. Use plazas, green spaces. Natural wind paths, corridors.

Thought of it in planning, along the coast, good ventilation.

→ coastal cities have more ressources compared to inner cities.

Question   Major quality major concern, how the wind can relieve the pm particle, look forward for extensions.

→ air pollution next target. More stations, Wuhan is big.

Question (ZH)   Macro-design. Have data on wind penetration rate. Zhuhai, different from Hong Kong. Do have such data ?

   $\rightarrow$ some data on all, some on some cities only. Upper bound on density : 50%. Some developers build huge properties along the coast : impact on ventilation. Consider danger on building long building along the coast.

M. Bida, C. Rozenblat and E. Swerts

C. Rozenblat   The basis assumption is the observation of hierarchy of city systems across the world at the macroscopic level, as it was mentioned before. The objective of the model is to reproduce these properties from the interaction of micro agents. At the micro level, transport choices, consumer choices and economies of scale are fundamental economic processes.

M. Bida   The model includes economic agents, consumers and producers. Consumers are localize in settlements, and the producers locate themselves in the isotropic space. The dynamics translate a trade process, competition and profit accumulation. A producer has production cost and transport cost, plus fixed costs and prices, and aims to maximize its profit. The fixed costs imply economies of scale. Consumers adapt the quantity they buy according to price, given an allocated budget. To maximize their profits, producers will lower or raise prices depending on profit variations. If the profit becomes negative, they disappear. Economic assumptions on the market are a monopolistic competition, i.e. one type of good but different varieties ; no game theoretical behavior of consumers ; group of firms has no influence on global economy, so not on the allocated budget ; and entering and quitting the market is free. With static consumers settlements, the model can yield the emergence of hierarchy in producers spatial patterns.

Results   Parameters variation.

   Transport cost : d^α concave, linear and convex. The higher distance exp, the higher cumulated profit.

   Influence of ecnoomies of scale : changes hierarchy level.

   Demand distribution : how consumers spread across products (cheapest, or distribute among all prices). influence on hierarchy strength.

   (Rq : les plusieurs rgimes sont intressantes)

Discussion micro-macro   transport costs protects close producers. Econmies of scale favorize already settled. Early producers have advantage.

   Combination of params ? maximize hierarchy.

Next steps   How innovation improves.

   (Q : population constant in each settlement ?)

   (Elfie) Application to Chinese cities ?

   Micro level : Techno, collaboration, finnancial links ; Then meso level.

   CitaDyne :   `http://www3.unil.ch/wpmu/citadyne-news`

Question   Is the value of the land in the production cost function ? $\rightarrow$ Value of land is not yet included in the model. Including the cost of labor would also imply taking into account more variables.

Shaojian Wang

Context : climate change. China big contributors to emissions : recent focus from different perspectives on how to manage different perspectives.

   Low carbon metro-area.

Difference between low-carbon and ecology. emphasis on functionality vs biosystem. different economic implications : ecology circular economy. Sptail difference : density vs spatial diversity.

Compound concept : combination of both.

Development of low-carbon eco-cities. in 90s, new districs : international experience. 2000s :domestic reference.

low-carbon new national ref. Future trend of Chinese urbanization.

Requirements (many).

Focus on efficent spatial usage.

Promesses of ZH gov (2014) Khopenhague. In 5 year plan ; inflex emission.

but not all cities realized urgency of this issue. Current issues and achievments.

57% of total impplement. SOme publish first batch on pilots. 8 cities.

Demonstration areas. Industrial parks. promote low carbon transformation

26 parks under construction ; includes shouzhou, tianjin that passed first time assessment.

Lot of parks, but real low carbon cities are not that much. Shenzhen raw model.

low carbin clusters and indutrsty clusters. new goalpoint of CHinas economy.

On pilot projects : three categories.

Problems : - people taking profits on the concept. - governements become endetted. - still developing industries on low end, not green industries. - large cities (rq : morphology / consumption : pb : les gens utilisent single dimensionnal ; tout la q est de cpaturer le max de dimensions significative la q...)

Make sure enough space for construction.

Agriculture and tertiary industries : integration of smart cities/smart industry / eco cities eco industries.

central gov. propose smart spaces : produiction, living, ?. integarted into integration model. facilitate colboration baks, gov, companies. attract more private capitals : shift from real stat dev into smart low carbon industry.

Set of indexes : how to guide planners/developers. Integarte concepts and theories into planning practices : tax/land/dmeolition policies, need to be formulated properly.

Last but not least, policies for dev low carbon cities.

Q Liao Liao did not pay attention to policies. Low carbon is more top-down. What about local gvernements : cities, township, villages. do they implement policies from provincial gov ?

→ yes difficult. many conflicts. Central gov. has very amitious targets, but how can be break down into feasible targets at lower levels remains open question. Many areas received standards ; do have policies but just guiding. for local gov, still pay more attention to economic (GDP) for small and medium cities. Policies are better implemented in larger cities. It takes time.

Q Polli Strategies : smart spaces devoted to industry and agricultures. Consideration on how model new buldings ?

→ For low carbon policies, different guidelines on different domains. bulding : low carbon materials, use of energy savings lamps etc. No compulsary regulation

(Zhou) For sustainibility, both importance of research and policy making : more discussions linked to more modeling. Suggestions for further discussions : what about connectoin with physical aspects. Impact of physical georgaphy context ? Connect physical context (presentation wind path) with toy models, would give more reasonable models. More taking planning in instituionnal context (very important for China). (rq : misunderstainding on aims of ABMS : dont want real world simulation) for wind path : more connection with human geography ? lot of info.

F. Pfaender

The presentation is about how to make cities in the lab from data, or how to construct macro models from micro data, and then apply them back at the microscopic scale. Understanding how microscopic interactions work can help to get a glimpse of the organisation of human traces.

Type of data ; not linked to tradiotionnal fields : in one place, all kinds of data. example : air conditioning car -¿ heat -¿ people working move -¿ change economy.

Data that can be collected have particular properties, what can be summed up as "Multi³". They are multi-scale, from the building and the neighborhood, to the city, and the system of cities. They are multilayer, implying different type of data and collaboration with different people. And they imply multiple timescales, with very different lengths. Harvest or capture data can be done in many ways, from the simplest to the hardest : datasets, use of API, scrapping, data sensing, small data. OpenStreetMap, with here the example of Guangzhou, is a directly usable dataset. The API answers to specific requests, here with the exemple of meetup.com. Webscrapping is a bit more difficult and implies getting data from the webpage. Constructing data sensors, such as handmade pollution detectors for mobikes, is powerful but costly and time-consuming. Finally, "small data" implies questionnaires and is the hardest to collect.

Learning from data : - Data harvesting - Data exploration - Data modeling - Data simulation.

macro level : with everybody.

Latour, Pandora's hope : know what you loose when filter

Urban setllements : last character : spatial clusters.

Comparable situations ?

Urban street patterns : global framework of comparison ?

Then go back to micro situations where you miss the data. : have data for cities which dont have, dont forget cities. small settlements. (rq : different regimes). aim of this work that embeds everybody.

Question How to choose the data to collect ? → It depends on the project. Every kind of data can be found at a location, sometimes all the possible data is collected.

Question The regional patterns of last character place naming, did it surprise someone ? → It is a very recent work. There is some spatial clustering, so there may be something that can be done.

Question How can we ensure accuracy of data ? → It generally comes from several sources and can be sometimes very noisy, there is no general way to ensure accuracy.

Y Yue

This presentation focuses on where migrants live in the arrival city, with the case study of Shenzhen. A photo from the laboratory shows a construction site, next to the most expensive area in the city, that was two years ago still an urban village. Migrants could afford the place before, they had now to move to outskirts. The context of Shenzhen is particular with a rapid growth, it went from 6 to 10 districts in 9 years. The population is 20 million people, of which 77% is from migration. The average age is 32,5.

Conventionnal approach to get data : questionnaires.

Approach : trsanit smart card data.

Profile of transiters : younger, graduate, middle-low income, 85% tenants.

Rush Hour peaks.

bus smart card data : no get down data.

(model specification ?)

results : where people live and work. work most in inner zones.

Compare with map of Urban villages (density).

Largest Urban village next to most expensive area. (photos.. : commodities ?)

-¿ Reconstructed. Where do people reolcate ? : relocation heatmap, compared to housing prices : most go in an other urban village.

Relocations : move from the center to outskirts.

Clusters : local and moran I : clusters highly significant.

Increase of commuting time (PDF)

Implications : Urban vitality, Urban gentrification, Urban decline (photo : central area very expensive but empty), spatial segmentation, social issues.

Research programs, drama, articles : debates on Urban village renovation.

Impcation : city competition. (? outperforms HK) ; competition between districts. Migrants are driving force. Need to rebalance, what about central areas.

COnclusion : urban renewal strategy and attitudes towards low-rent housing is key to sustainable development.

Q More moral/soft way of renewal ? how to mitigate effects ?

→ debates urban designers/architects on how renew urban village. possible soft ways. Governement recognizes problem of prices, but low rent housings are very far from the center.

Q (italien) how do people play a role in planning of the place where they live ? bottom-up

→ some debates and experiments - promotion of participative urban planning. (better answered by an urban planner expert).

Comment Natacha Liede village in Gangzhou to be visited : problem of scheme is that includes only land owners ; renters not included, need to leave the zone.

Q support government decisions : they want people "to go" : want people leaving "ugly places" : beware, this research can give support to govt

→ yes, must be careful.