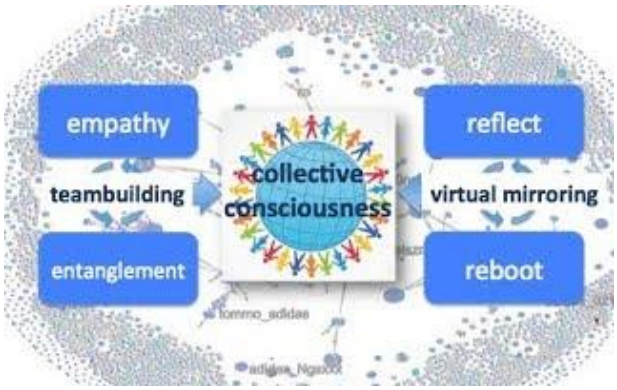
MEASURING THE COLLECTIVE MIND



TRACKING THE EMERGENCE OF NEW IDEAS THROUGH SOCIAL MEDIA AND SOCIAL NETWORK ANALYSIS

Welcome to the MIT/University of Applied Sciences Northwestern Switzerland FHNW/University of Bamberg/**University of Cologne**/Jilin University **Collaborative Innovation Networks (COINs2017) seminar**.

OVERVIEW

This seminar shows how to measure and track collective consciousness both within organizations, and globally on the Internet using social media analysis. It combines latest insights from social media monitoring, machine learning, and big data. It introduces the concept of “coolhunting” in three information spheres, the crowd – mostly found on Twitter, the experts – found on blogs and Web sites, and the swarm – on Wikipedia and in online forums. It also shows how to do “coolfarming”, tracking and supporting the creation of Collaborative Innovation Networks (COINs) in organizations by analyzing e-mail and other communication archives and providing a mirror of their communication patterns to users. The goal is to improve communication, leading to better collaboration, leading to more innovation.
The degree of collaboration can be measured through six honest signals of collaboration, strong leadership, balanced contribution, rotating leadership, responsiveness, honest sentiment, and shared language. The seminar explains how to implement these concepts using the software tool Condor, developed by the lecturer and his team at MIT. Condor calculates the six honest signals of collaboration, tracking the degree of collective consciousness on online social media such as Twitter, blogs, or Facebook, or corporate e-mail, calendar, and skype archives using dynamic semantic social network analysis and machine learning.

CONTENTS

The seminar describes how to track new trends by coolhunting – finding new trends by finding the trendsetters; and coolfarming – helping the trendsetters getting their idea over the tipping point. It is based on dozens of case studies done with companies around the world, analyzing the new idea creation process through tracking human interaction patterns on three levels:

On the global level, macro- and microeconomic indicators such as the valuation of companies and consumer indices, or election outcomes, are predicted based on social media analysis on Twitter, Blogs, and Wikipedia. On the organizational level, productivity and creativity of companies and teams is measured through extracting 'honest signals' from communication archives such as company e-mail. On the individual level, individual and team creativity is analyzed through face-to-face interaction with sociometric badges and personal e-mail logs.

The seminar also presents the concept of 'Virtual Mirroring', increasing individual and team creativity by analyzing and optimizing the six “honest signals of collaboration”: 'strong leadership', 'rotating leadership', 'balanced contribution', 'fast response', 'honest sentiment', and ‘shared context.’

It introduces the three phases of building your swarm, based on the concept of Collaborative Innovation Networks (COINs), small groups of self-organizing, emergent teams collaborating over the Internet. COINs are leading to larger groups, the Collaborative Learning Networks testing the prototypes of the COIN, and the Collaborative Internet Network spreading the word about the cool products of the COIN.

The seminar consists of two main parts:

1. Coolhunting - finding trends and trendsetter

2. Coolfarming - COIN building by reaching out to the trendsetters, getting them to collaborate, and develop a new product that will change the world.

GOALS

In this seminar you will learn how

- the radical innovation process in small teams works
- to find trendsetters and trends on the Internet and social media
- to predict trends using social network analysis und statistical forecasting techniques
- to increase organizational efficiency and creativity through a virtual mirror created of organizational communication archives
- to promote your own cool ideas through viral marketing on the Internet

COURSE SEQUENCE

1. learning the necessary skills through teacher-supported online self-study
2. presenting the state of the art in research in class, and presenting a virtual mirror of oneself in class
3. deciding on a course topic
4. COIN creation (teams must be international)
5. coolhunting using Condor on course topic, connect to international experts
6. collaboration in international team, weekly meetings (team-members must only be present for their own projects)

COURSE PARTS

I) Self study of foundations

Skills to be acquired in (teacher-supported) online self-studies

- SNA (introduction and practical example in Condor + MOOC links)
- ONA (introduction and practical example in Condor + MOOC links)

- Trend forecasting (example: election prediction) (introduction and practical example in Condor + MOOC links)
- Statistics (MOOC links)
- Programming & web design (MOOC links)
- COINs, coolhunting and coolfarming (MOOCs developed by Peter)

II) In class presentations of latest research by student teams

Students present most recent developments of social prediction in class in teams of 2, based on research papers, writing a handout – goals and content structure are given in topic descriptions, students will develop lessons

- Facebook
- Twitter
- ONA
- Stock trend prediction
- Behavioral economics

Presenting a virtual mirror of oneself in class

III) COIN project

- **4-6 team members from at least 2 locations (Cologne, Bamberg, Brugg, Jilin) (transparent selection in Google Docs spreadsheet)**
- Topics can be nominated beforehand by participants (but only BEFORE the project phase starts)
- **Weekly status meetings (members only need to attend for their own topic)**
- **Monthly all hand meetings**
- **Virtual mirror half-way**
- **Students need to document projects on Website**
- **Students (in groups) need to Submit a Seminar paper (Final Paper) until July 15, 2017**

This is a demanding course, as it combines skills from many interdisciplinary fields:

- Social network analysis
- Using our own tool Condor for analyzing online social networks
- Statistical methods, Data Mining and Filtering
- Software development
- Concept visualization and information modeling

INSTRUCTORS:

Peter Gloor & Gloria Volkmann (volkmann@wim.uni-koeln.de)

DATES

INTRODUCTORY BLOCK COURSE

April 10, 2017, 10-16

April 11, 2017, 10-16

PROJECT PART: VIRTUAL MEETINGS

Mon April 10, 2017 12:00-14:00 team formation

Mon April 24, 2017 12:00-14:00 (virtual)

Mon May 8, 2017 12:00-14:00 (virtual)

Mon May 15, 2017 12:00-14:00 virtual mirror

Mon May 29, 2017 12:00-14:00 (virtual)

Mon June 12, 2017 12:00-16:00 final presentation

LOCATION

All courses will be taught in Room 401 (Pohlighaus).

LOCAL COURSE INFO

beginning/end of term: April 18 - Juli 28, 2017

course credits: 6 ECTS

expected hours spent for project: 30 h (in lectures); 150 h (at home)

Please note that attendance is mandatory at the above mentioned Dates.
If you are not able to attend the meetings please contact us beforehand.

PRE-WORK FOR BLOCK COURSE APRIL 10/11

1. Install Condor on your laptop, following the instructions on page 85-88 of Sociometrics.
2. Complete the coolhunting tutorial pages in Sociometrics (p. 89 to 108)
3. Complete the virtual mirroring/e-mail analysis tutorial in Sociometrics (p. 109 to 136)
4. In teams of 1 or 2, select a paper in the Google Doc linked here, write your names below the paper titles.

   On April 10, the instructors will answer your questions regarding these topics.

   On April 11, present in 3 to 5 minutes either a virtual mirror of your mailbox, or the results of a Web coolhunting of your topic of choice. Also, in 3 to 5 minutes, and using 3-4 Powerpoint slides present the key points of the paper selected in (4) above.

FURTHER COURS INFORMATION

Detailed information about the course can be found on the Web site
https://sites.google.com/view/coincourse17-a/home

PROJECT EXAMPLES

Project examples can found on the Website:

https://sites.google.com/view/coincourse17-a/projects

The Project list will also be updated and extended in the next weeks.
A complete and up-to-date list will be presented in the INTRODUCTORY BLOCK COURSE at the latest