

\*本メールは、一般社団法人日本LCA推進機構のメール会員登録をいただいている方へお送りしています。この場をお借りしまして、ご登録いただきましたことを厚く御礼申し上げます。

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■■ ニュース ■■

- 産業技術総合研究所(産総研)に「LCA活用推進コンソーシアム」が設立されました！
- ・一般企業の会員を募集中です(年会費25万円)。中小企業会員及びアカデミー会員(大学・研究機関)の割引があります。
  - ・「コンソーシアムが目指す方向性・理念」は以下です。『脱炭素イノベーションの普及に向け、製造業だけではなく、製造業を支える金融業及び中小企業なども含む多様なステークホルダーの皆様「見える化」をご理解していただくこと、社会全体で「見える化」を促進することにつながる対話を行うこと、そして「見える化」を支える最新のデータベースを整備・維持していくこと、を目的として本コンソーシアムを設立しました。』
  - ・会員には、各種の勉強会・講演会が提供されます。
  - ・LCAF理事長・稲葉敦がこのコンソーシアムの会長に就任しました。コンソーシアムでは、LCAデータベースIDEAを整備・管理し、金融業を含めた会員の皆様と共に社会全体にLCAを広める活動をしたいと思っております。一方このLCAFでは、それぞれの企業の個別のニーズに合致する支援を行って行きます。さらに、稲葉が副会長を務めるLCA日本フォーラムでは、今までと同様に工業会を通じた産業界のLCAデータの構築・公開を支援し、我が国の産業界のLCA活動の基礎を担って行く活動を継続します。それぞれの組織が、その特徴を活かしながら、「ライフサイクル思考」を広める活動をし、全体として持続可能な世界をリードして行くということだと思っております。
  - ・今後の活動に関するご意見・ご質問は、以下にお寄せください。
    - # 産総研「LCA活用推進コンソーシアム」：[lca-consortium-ml@aist.go.jp](mailto:lca-consortium-ml@aist.go.jp)
    - # 一般社団法人日本LCA推進機構：[contact@lcaf.or.jp](mailto:contact@lcaf.or.jp)
    - # LCA日本フォーラム：[lca-project@jemai.or.jp](mailto:lca-project@jemai.or.jp)

■■ 特集 ■■

海外のLCAFネットワークの皆さんに、「日本の大学は、ほとんどがオンライン授業を実施しています。学内施設が使えないので、授業料の一部を割り引いた大学もあります。工学系の実験は延期になっています。今後どうなるのかわかりません。」と伝え、それぞれの国の大学の様子を聞きました。7月24日(金)～7月27日(月)に届いた返信です。

○スウェーデン

- ・All of our meetings at the university are on the web. My daughter, who has been teaching on the university during the spring semester has done so with Teams and Zoom. But now she is on vacation, but at home. I am not teaching any more, only participating in research projects. At Chalmers, teaching via the web will continue during the fall except for experimental works, which will be carried out at the university.  
(稲葉)春学期はオンラインで済ませ、既に夏休みのようです。実験系はやはり大学で行うようです

ね。

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### ○オランダ

・ Although the economy has opened, universities have opened only a little bit. Most teaching will still be online in the new semester. Sorry for not having more time to react, but I am very busy preparing my online teaching 😊

(稲葉)ここもオンラインです。まだ春学期の講義が続いているようです。

・ Classes will have to have 1.5 distance -> capacity slashed -> virtually all large teaching classes online. Smaller working groups physical. Studies depending on labs with highly reduced capacity in big trouble. Indeed. Very difficult situation since there is only so much you can replace by virtual things in experimental studies. Normally students buy their own computer, so no change here. For now no reduction in fees. Libraries etc. are open. We have sports activities re-opened. Open air no major restrictions, inside with social distancing and caps on numbers.

(稲葉)大人数の講義はオンラインですが、実験系はそうも行かず。図書館などは再開始。パソコンは自前で準備し、授業料の割引はなし。まあ、以前に戻りつつあるということのようです。

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### ○イギリス

・ UK universities are doing different things. First, they closed completely. Now some are doing teaching online and will do so to September 2020. Some are following government guidelines on distancing and hope to open again in September/October. There has been no reduction or refund of fees for students.

I can't tell you much more than that - there is not one system for all universities.

Personally, I think that universities will not do so well in the next few years because student might decide not to go to university until Covid risk has improved or there is a guarantee that they will be taught (and that the university will not close down again). And because of Brexit, there are less students from overseas coming to UK universities and this is a large part of their income.

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(稲葉)大学によって違うようですが、基本的にはオンライン、授業料の減免なし、ということのようです。EU 離脱で海外からの留学生が減るといった心配もあるようです。

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### ○オーストリア

・ TU Wien was closed for students since the lock down on March 16th until June 22nd, so more or less the entire summer semester which was completed by the end of June. All classes were online classes. Just now students are again allowed to reenter universities and to see supervisors or go for private consultations and of course exams if there was no agreement to arrange even exams online. Most universities in Austria had similar rules. We do not have yet the plan for the autumn semester which will start on October 1st, 2020. A continuation of online courses is likely.

Laboratory work depends on the arrangements with supervisors and precautionary measures taken. In fact my daughter is working in a TU Lab during this month to write her school thesis for the chemical highschool. So practical works are possible!

University is almost free in Austria, but this expense is not too critical for students. The costs for the flats are more serious. As a general rule, all rents can be postponed but have to be paid at a later date. If not before, latest until the end of 2021 all rent costs that could not be paid in time have to be settled.

(稲葉)ここも講義はオンライン、実験系は個別に実施ですね。6 月末で春学期は終了。10 月から新学期ですが、まだどうするか未定とのこと。そもそも授業料は無料(え、そうなんですか!)で、家賃の支払いが 2021 年末まで延期されているようです。

・ Lecture rooms can be used for exams, due to low occupation rate and the already practiced "social distancing" during exams. For ordinary lectures they can only offer a limited, reduced capacity from normal. Any presence lecturing has to be agreed beforehand with the dean of

students who provides permissions

(稲葉)リアルな講義は学部長の許可が必要ということのようです。

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○スイス

I guess the following link provides the best information on the situation and planning at ETH Zürich: <https://ethz.ch/services/en/news-and-events/coronavirus/students.html>

(稲葉)URL の紹介ではなくて、重要なことを書いてくれるとうれしいのですが。。。しかたがないので URL を見ました。8 月末までは春学期を継続、試験と実験は登校して行う。9 月の新学期はまだ未定ですね。

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○タイ (タイの人達は親切でたくさん返信が来ます。)

・ Kasetsart University has just fully opened the new semester on 13th July. It's the first semester of this academic year. We've adapted the class for the new-normal style under the pandemic. Our university has rules for the lecture in class to have 4 square meters space per 1 person. Lecturers have to clarify the method teaching online/offline/ or mix with how many percent of each method. If the room space not enough for the number of student registered, the faculty will try to schedule the bigger room for the class. All classroom had set to be separate seating and we have alcohol cleansing for all student before and after class. After class the housekeeper will clean all the table before the new class starts.

I'm using the flip classroom concept, which have some lecture clip online in many modules and separate student into group A and B. Then we have others activity in class room separately for each group. This may help we can maintain social distancing and also can have some class activities and check the students understanding.

For the experiment subject and lab, in our department have split to smaller groups. We expanded section of lab. As you know, all the experiment subject and lab have to be on site and we can't do it online.

(稲葉)7 月 13 日に新学期が始まりました。ひとりあたり 4 平方メートルを確保して、講義ごとに清掃員さんが机を消毒、徹底していますね。実験系はやはりリアルでないといけないようです。

・ Chiang Mai University has already opened for the first semester of 2020. The screening and quarantine processes have been strictly perform not only at the university's main gate but also in each department of each faculty. Microsoft Team has been introduced and applied for all classes to enhance the online classes. However, half of students have been requested to come to attend class while half will participate via online systems. All student activities have been postponed ie. sports. We will keep watching the situation closely to avoid the second wave of outbreak.

(稲葉)学生の半分がオンライン、残りの半分が登校というのですが、一つの講義で半々だということでしょうか？ また聞いてみます。

・ As I have mentioned in one of my earlier replies to your e-mail, the COVID situation has changed quite a bit of our teaching and other work at universities. I have, for instance, been working from home since March. Last week I went to my office for the first time in 4 months. As physical lectures were suspended, we completed the semester by online lectures. The lab work has been temporarily suspended as we seem to be following social distancing very strictly.

The next semester too will be the same. We have already been instructed by our university administration to prepare all courses online. They can be synchronous, asynchronous or hybrid. There may some opportunities to directly meet with students for short periods of time for discussion, but under controlled conditions (social distancing and so on).

I understand the need for online lecturing for the moment, but do not agree to make it the "new normal".

(稲葉)全ての講義がオンラインですが、この先生はオンライン講義には反対のようです。その理由を聞きました。以下です。

・ Online classes have many advantages. However, to make it a "new normal" is not always a

good thing. There are many styles of delivering lectures, especially for classroom teaching (as opposed to conference talks or seminars). For example, I teach by asking questions; this is my style and I think it is quite effective to engage the students rather than letting them be passive listeners. Also, I have a lot of class exercises which I have the students solve by themselves first but I go around looking at individual students trying to attempt the exercises so that I can identify those who need help. After allowing them some time to solve the exercise by themselves, then I solve it myself on the whiteboard, making some extra explanations for those parts where I found some students struggling when I walked around looking at individual students. I think this is a bit difficult to do "online". Also, I feel that the level of engagement reduces during online attendance of lectures as the students may have distractions on hand (e.g. social media via smartphone ... I sometimes see students trying to sneakily do that in physical class too, but I stop them). The third point is that human beings are social creatures by nature, to add an electronic medium to reduce direct human interaction may lead to other social issues in the longer term (just my thought).

(稲葉)対面講義の良さを解説してくれました。よくわかります。この先生は人が好きなんですよ、きっと。

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#### ○韓国

・ In Korea, the spring semester starts from March and ends by the end of June. This year all lectures except some experimental courses for both under and graduate programs in universities in Korea were online. While the online lectures went somehow ok, the professors had difficulties in grading because the examinations were online too.

In Korea the fall semester will start from September. Both on and off-line lectures will be provided. The classes under 50 students will use on-line/off-line (50/50) lectures. For off-line lectures larger classrooms will be used to keep distancing between students. On the other hand, however, the classes with more than 50 students will use only on-line lectures. For graduate courses, the universities plan to provide off-line lectures.

(稲葉)3月からの学期は6月末で終了。実験系以外はオンライン。試験もオンラインで実施(どのように実施したのでしょうか) 9月からはオンラインと登校と併用ということですね。

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#### ○中国

・ All the students are in summer break now. Actually, except those in Beijing and cities (for example, Wuhan) in Hubei province, students were came back to school in March, April depending on the number of COVID 19 cases to distinguish high, medium and low risk areas. From the news, and feedback of my friends, if there is no break out in Beijing or other cities, the primary, middle, high schools and universities will start the fall semester on September 1st. That means, students will back to schools, universities, etc. for their classes. And if there is break out in some place, I believe that the shutdown of schools will be temporary. Schools have plan B to switch online during that period. For example, the one last month in Beijing, the control measure (isolation, test, wearing mask in public, etc.) was very good and efficient. The total cases were over 300, and no new case has been found in the last 17 days so far. People are more and more used to live with the existing COVID19 now. According to the latest news, there is a break out in Xingjiang now. And 3 cases are found in Dalian. So I don't think there is any problem for engineering schools to have experimental works. I was told that the students can go to the labs with reservation which the number of persons in the lab, and the time for staying are controlled. Another news, the cinema will reopen in Beijing tomorrow with no more than 30% occupation. The cinemas in other places were opened a couple of days ago.

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(稲葉)北京と湖北省(武漢がある)を除くと、既に夏休みです。9月1日から新学期が始まりますが、病人が急に増えたら学校閉鎖でオンライン授業ですね。北京では明日から映画も30%の入場者で再開です。全てが元に戻ると言うことのようなのです。

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・アメリカ

In the US, universities will vary greatly in how they will handle fall semester. Some have already said they will be 100% online. Others have made weak-to-strong statements about wanting to have classroom education as well, in some form (maybe, smaller classes?). Most universities are waiting until the last moment to make a decision, and know even after they make a decision it may have to change. Since many courses had to change to online in spring, and ASU has 50,000 online students already, most faculty have experience in the pedagogy and technology of online teaching. One complexity is that we have international students who would otherwise be on campus, but will instead be in their home country. If everyone is in the same time zone, roughly, you can do a synchronous class online. But with a global variety of time zones, we'll have to rely more on taping and asynchronous online approaches. Finally, I have seen our university's guidelines for campus re-opening and maintenance and it's enormously detailed. It will take a school money and discipline to implement the needed processes and controls.

(稲葉)秋学期もオンラインで行うことになる、時差がある国へ帰った留学生への対処が問題になるという指摘です。日本の大学はあまりこういうことを言わないように思います。

・ We moved to remote teaching last March. We will have a hybrid teaching in the Fall, with in person but distanced more than 1.8m. between students for small classes who will wear a mask, but remote teaching for large classes. This is a pragmatic solution, provided COVID-19 does not increase further in Michigan

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(稲葉)大人数の講義はオンライン。少人数は 1.8m の距離を取ってリアルで実施。これが標準になりつつあるようですね。

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(稲葉)全体として、大人数の講義はオンラインで行い、それが難しい「試験」や「実験系」は少数グループでソーシャルディスタンスを保つことができるように工夫して大学で実施ということのようです。韓国では(聞くところによると中国でも)試験もオンラインで実施した大学があるようです。学費を割り引くという措置は、この返信で見る限りどこにもありませんでした。そもそも大学の学費がない国もあります。サークルなどの活動はどの国も学生の自主性にまかせるという判断のようです。実質的には、ストップということでしょう。

## ■■ 編集後記 ■■

○雨が続いています。GoToが始まりましたが、都民なので自宅で LCAF 通信の編集をすることにしました。土・日は電子メールも少ないので、仕事ははかどります。

○COVID19による大学の変化を特集しました。今までの対面の講義・指導に比べて教育の質が低下するのは避けられないように思います。その卒業生を受け入れる社会もまたオンライン活動ですので、一つのことを深く議論するということが難しい社会になるのではないかと心配しています。個人的なつながりも、SNSで「いいね」ができる嗜好(思考)が似ている人のネットワークに分断されているように思うと、ロダンの「考える人」がとても貴重に思えます。

○産総研が「LCA活用推進コンソーシアム」を設立しました。私がセンター長を務めていた「LCA研究センター」の活動が継続し、さらに大きな役割を担うようになったのだと思います。

○まだまだ雨です。今年はいつ梅雨が開けるのでしょうか？

私の興味だけで記事を書いています。おもしろがってくれる人がいてくれるなら、とてもうれしいです。⇒感想をお送りください。

(LCAF 理事長 稲葉 敦)

ご意見、ご感想、本メールマガジンの解除のご連絡はこちらまで  
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