BUDAPESTI
**CORVINUS
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CORVINUS INSTITUTE
FOR ADVANCED STUDIES

Activity summary of CIAS research fellow in Budapest

Grant category: ☐ junior ☒ senior

Name: Pierre von Mouche

Home institute (name, position, country): Wageningen University, Assistant Professor, The Netherlands

Academic Year / Semester: 2021-2022 / second Semester

Duration: 3 months

Project title: Aggregative Games and Generalized Convexity

Project description*:
The project concerns three topics: the Selten-Szidarovszky technique, bi-concavity and Floquet theory. Concerning the first topic the main research problems are: generalizing the technique to the setting of aggregative variational inequalities, relaxing differentiability assumptions and allowing for general domains, deriving powerful practical uniqueness results for aggregative games. Concerning the second one: exploring the quite new notion of bi-concavity further and in particular the relation between the marginal revenue condition and log-concavity. Concerning the third one: shock independency of the periodic Samuelson-Hicks model.

Achieved result(s)*:
Research problems of first topic completely handled for setting where domains are the non-negative reals. Research problem of relation between the marginal revenue condition and log-concavity completely handled. Concerning research problem of third topic a conjecture has been formulated.

Connected publications*
1.
Title: Aggregative Variational Inequalities
Date of submission/acceptance/publication: submission 10/07/2022
Journal: Journal of Optimization and Applications

Journal category (if applicable): ☒ Q1 ☐ Q2 ☐ Q3
Status: ☐ accepted/published ☒ in progress ☐planned
2.
Title: Marginal Revenue Condition versus Log-concavity
Date of submission/acceptance/publication: 20/07/2022
Journal: Journal of Optimization and Applications
Journal category (if applicable): ☒ Q1 ☐ Q2 ☐ Q3
Status: ☐ accepted/published ☒ in progress ☐planned

3.
Title: Floquet Theory and Shock-independency of the Periodic Samuelson-Hicks Model
Date of submission/acceptance/publication: +- 01/10/2022
Journal: Decisions in Economics and Finance
Journal category (if applicable): ☐ Q1 ☒ Q2 ☐ Q3
Status: ☐ accepted/published ☐ in progress ☒planned

Professional collaborations, partnerships*
1.
Name: Ferenc Szidarovszky
Institution: Corvinus University Budapest
Field of research: Mathematics
Future plans for joined research: yes
2.
Name: Zoltan Kannai
Institution: Corvinus University Budapest
Field of research: Mathematics
Future plans for joined research: yes

Additional activities* (public lectures, presentations, professional meetings, media connections etc.):
1. CIAS Workshop (11/05/2022)
2. Presentation at the Game Theory Seminar (20/05/2022)

Future plans, planned return (if any):
☒ I plan to return to Hungary later
☐ I plan to maintain my professional contacts via e-mail

☒ Any other comment: I like CIAS!

*Please give us a properly detailed summary.

Date: 25/09/2022

Signature: