

Supervisor report

| | |
|------------------------|--|
| PhD student | Alessandro Dal Corso |
| Start of study | 01.10.2014 |
| Date of birth | 21.02.1989 |
| Thesis submission date | 31.03.2018 |
| Title of the thesis | Towards Interactive Photorealistic Rendering |
| PhD school/department | MFI / DTU Compute |

Please list all **current** supervisors below:

| | |
|---------------|----------------------|
| Title | Associate Professor |
| * Supervisor | |
| Full name | Jeppe Revall Frisvad |
| Date of birth | 01.11.1980 |

| | |
|--------------------------|-------------------------|
| Title | Associate Professor |
| * Co-supervisor (if any) | |
| Full name | Jakob Andreas Bærentzen |
| Date of birth | 31.05.1973 |

| | |
|--------------------------|--|
| Title | |
| * Co-supervisor (if any) | |
| Full name | |
| Date of birth | |

Joint author statement

- ☒ The PhD thesis contains excerpts from **7 articles**, of which **7 articles** are co-authored. The joint author statement(s) are enclosed with the thesis
- ☐ The PhD thesis is a monograph and does not contain articles

Popular science summary

- ☒ A popular science summary of the thesis, its innovations and their utilization of approximately half a page has been sent to the PhD Office via DTU Doc by the PhD secretary at the department. The form can be found on [DTUInside](#).

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External research stay

| | |
|-------------------------|-------------------------------------|
| University or company | NVIDIA Corporation |
| Country (if outside DK) | USA |
| Period | 26.11.2015 to 15.05.2016 - 171 days |
| University or company | University of Tokyo |
| Country (if outside DK) | Japan |
| Period | 27.09.2017 to 21.12.2017 - 85 days |

* Dates as well as duration (number of days/weeks)

Studies abroad (Conferences, courses etc.)

Please state all the PhD student's studies abroad during the PhD studies. Please state location, country from which the funds for the journey and stay were provided, type of stay (conferences or courses), period of time as well as duration.

| | |
|-----------------------|----------------------------------|
| University or company | SIGGRAPH Asia 2015 |
| Country | Japan |
| Financing | DTU Compute PhD scholarship |
| Type of stay | Conference |
| Period | 02.11.2015 to 05.11.2015, 4 days |

* Dates as well as duration (number of days/weeks)

| | |
|-----------------------|----------------------------------|
| University or company | EGSR 2016 & HPG 2016 & MAM 2016 |
| Country | Ireland |
| Financing | DTU Compute PhD scholarship |
| Type of stay | Conferences |
| Period | 19.06.2016 to 24.06.2016, 6 days |

* Dates as well as duration (number of days/weeks)

| | |
|-----------------------|-----------------------------|
| University or company | SIGGRAPH 2017 & HPG 2017 |
| Country | USA |
| Financing | DTU Compute PhD scholarship |

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|--|----------------------------------|
| Type of stay | Conferences |
| Period | 28.07.2017 to 03.08.2017, 6 days |
| * Dates as well as duration (number of days/weeks) | |
| University or company | SIGGRAPH Asia 2017 |
| Country | Thailand |
| Financing | Image section overhead |
| Type of stay | Conference |
| Period | 27.11.2017-30.11.2017, 4 days |
| * Dates as well as duration (number of days/weeks) | |

Overall evaluation of the PhD studies

- ☒ The course participation is in accordance with the most recently approved study plan.
- ☒ The dissemination activities are in accordance with the most recently approved study plan.

Review of the PhD studies

The review serves as the basis of the approval by the Head of the PhD school

* Please specify how the requirements regarding dissemination were fulfilled. Please also state how the requirements regarding the external research stay were fulfilled, if these were not accounted for above.

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Dissemination requirements were fulfilled through 250 hours of teaching assistance (distributed across courses 02393, 02561, 02562, 02564), project student supervision, various conference demonstrator presentations, 7 published peer-reviewed papers (5 of them first authored), and 2 papers, 1 poster, and 1 VR demonstrator presentations at international conferences.

Two external stays were completed during the PhD studies. One was at NVIDIA Corporation (nearly 6 months) and became a leave from the DTU employment, as NVIDIA wanted to secure the IP rights. Thus, the project period was extended. Nevertheless, the research carried out during the leave is still part of the PhD. The other external stay was at University of Tokyo (nearly 3 months).

Alessandro Dal Corso fulfilled all expectations and his performance has been highly satisfactory. I am convinced that his PhD committee will recommend that he is awarded the PhD degree.

Dissemination of the work conducted at his second external stay is not included in the thesis. However, results are very promising, and it will be exciting to complete this research during the next few months.

Alessandro has been a highly valued driving force in our section. We hope to keep him in the group as long as we are able.

☒ The overall PhD studies were completed satisfactorily.

☐ The overall PhD studies were NOT completed satisfactorily.

Date 29.03.2018 Signature _____
Supervisor

Approval of the overall PhD studies

☐ The overall PhD studies were completed satisfactorily. The PhD thesis may be submitted for

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— evaluation

☐ The overall PhD studies were NOT completed satisfactorily. The PhD thesis cannot be submitted for evaluation. Please specify the reasons for this decision.

Date _____ Signature _____
Head of PhD school

Confirmation from the PhD student

☒ I confirm having read this report.

Date 27.03.2018 Signature _____
PhD student

Reporting form to the ministry

| Place | | Time in percentage | |
|---------------|---------------------------------------|--------------------|---|
| 01 | DTU | 100% | % |
| 02 | Another Danish university | _____ | % |
| 03 | Hospital in Denmark | _____ | % |
| 04 | Another public institution in Denmark | _____ | % |
| 05 | Private company in Denmark | _____ | % |
| 07 | Public company in Denmark | _____ | % |
| 08 | Another employer in Denmark | _____ | % |
| 06 | Abroad | _____ | % |
| Time in total | | _____ | % |

Scientific profile according to discipline

Below, please give a rough percentage of the distribution of the total research activities of the PhD project according to discipline. **No more than three disciplines** may be indicated, so the distribution must be based on the most important disciplines. Remember that the figures must add up to 100 per cent.

Natural sciences

| | | | |
|-----|-------------------------------------|----|---|
| 120 | Mathematics | 20 | % |
| 125 | Computer science | 60 | % |
| 130 | Physics <i>*incl. biophysics</i> | 20 | % |
| 135 | Chemistry | | % |
| 140 | Geology | | % |
| 141 | Physical geography | | % |
| 142 | Human geography | | % |
| 145 | Biochemistry | | % |
| 150 | Biology | | % |
| 155 | Other areas of the natural sciences | | % |

Agricultural and veterinary sciences

| | | | |
|-----|---|--|---|
| 420 | Agricultural plants and horticulture | | % |
| 430 | Fishery | | % |
| 435 | Animal production | | % |
| 440 | Veterinary science | | % |
| 445 | Biotechnology in agriculture | | % |
| 450 | Other areas of the agricultural and veterinary sciences | | % |

Technical sciences

| | | | |
|-----|--|--|---|
| 220 | Building, construction and transport | | % |
| 225 | Electronics, electrical eng. and communications | | % |
| 235 | Chemical technology | | % |
| 240 | Materials | | % |
| 245 | Medico technology | | % |
| 250 | Power and environmental eng. | | % |
| 255 | Biotechnology in the areas power and environmental | | % |
| 260 | Industrial biotechnology | | % |
| 265 | Nanotechnology | | % |
| 270 | Other areas of the technical sciences | | % |

Social sciences

| | | | |
|-----|--|--|---|
| 520 | Psychology | | % |
| 525 | National economics | | % |
| 530 | Business economics | | % |
| 535 | Pedagogy | | % |
| 540 | Sociology <i>*incl. anthropology and ethnology</i> | | % |
| 545 | Jurisprudence | | % |
| 550 | Political sciences | | % |
| 555 | Urban and physical planning | | % |
| 560 | Media and communication | | % |
| 565 | Other areas of the social sciences | | % |

Health sciences

| | | | |
|-----|---|--|---|
| 320 | Basic medicine | | % |
| 325 | Pharmaceutical science and pharmacology | | % |
| 330 | Clinical medicine | | % |
| 335 | Odontology | | % |
| 340 | Health duty | | % |
| 355 | Care | | % |
| 360 | Community medicine and | | % |
| 370 | public health | | % |
| 380 | Other areas of the health services | | % |

Humanities

| | | | |
|-----|---------------------------------|--|---|
| 620 | History | | % |
| 625 | Archaeology | | % |
| 630 | Linguistics and Philology | | % |
| 635 | Literature | | % |
| 640 | Philosophy and history of ideas | | % |
| 645 | Theology | | % |
| 650 | Music and theatre studies | | % |
| 655 | Art and architectural studies | | % |
| 660 | Film and media studies | | % |
| 665 | Other areas of the humanities | | % |

Academic profile according to research areas

Below, please give a rough percentage of the total research activities of the PhD project measured in man-years, as it may be attributed to individual research areas

Please note that the list only includes selected research areas. The areas may overlap and the percentages may add up to more or less than 100 per cent.

| Research areas | Percentage |
|--|-------------|
| 002 Climate | _____ % |
| 003 Energy | _____ % |
| 013 Biotechnology | _____ % |
| 031 Globalisation | _____ % |
| 032 Environment | _____ % |
| 033 Food <i>*including food safety</i> | _____ % |
| 034 Cancer research | _____ % |
| 035 Nanoscience | _____ % |
| 039 Integration | _____ % |
| 040 Democracy | _____ % |
| 041 Welfare | _____ % |
| 042 Entertainment economy and tourism | _____ % |
| 043 Prevention and health promotion | _____ % |
| 044 Gender studies | _____ % |
| 045 Multidisciplinary research | _____ % |
| 046 Information and communication technology | _____ 100 % |
| 047 Cyber and information security | _____ % |
| 048 Robot and/or drone technology | _____ % |
| 049 Psychiatry | _____ % |
| 050 Transport | _____ % |

☐ The project included no research within the above-listed areas