

Anonymous Attendee

Complex fins for internal flows, high probability to face clogging issues that will block the heat flow.

Terry Hendricks

Did you lower the mass flow rate to enable lower pressure drops? Or did you get lower pressure drops at similar mass flow rates while enhancing the heat transfer?

Jun Xia

Question for Prof Sigmund: Could you please exemplify, in more detail, how approaches such as Phase Field and Level Set have been used for topology optimization for heat transfer applications? Thanks.

Kevin Uvodich

What sort of small feature size limitations do we reach if we try to reproduce an AM heat sink using investment casting?

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Maybe a good, pumped flow HX tradeoff metric is to relate the two losses: e.g. heat power not recovered divided by pump power required.

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What are your thoughts on 3D printed plastic heat exchangers? Do you think there is a wide enough market for them? What direction do you think the research is headed and where do you think it should head?

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Could an air-to-air heat recovery ventilator be made with TE embedded in it that was able to power its own fans? "perpetual ventilation"?

Ali Tofangchi

Thanks for great talk. My question is what type of solution can be conceived to address AM manufacturing of large volume parts? Is modular printing a way to go: 3D print of smaller parts followed by integration/bonding all pieces together to build the entire part?

Nicholas Jankowski

Is there any work that has included a fouling potential metric in the topological optimization scheme?

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AM has the potential for highly localized and variable process and material property control, absent from traditional manufacturing. Do you see any particular heat transfer applications to leverage this control/variability?