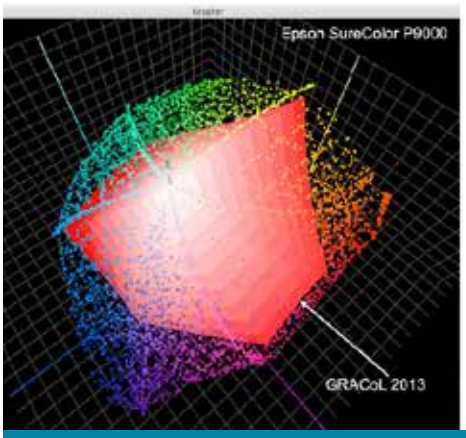

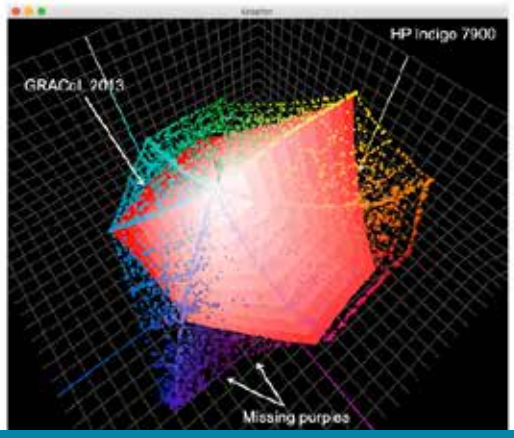

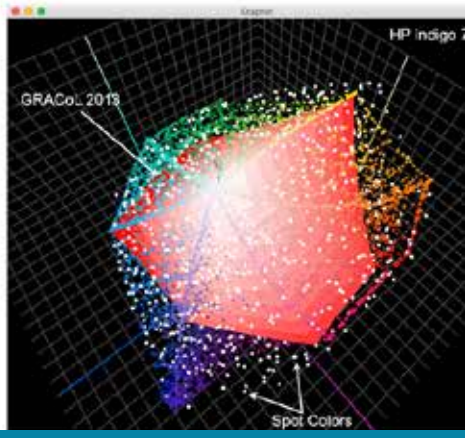

Expanded Color Gamut
March 23, 2023

Speaker
Dr. Abhay Sharma
Toronto Metropolitan University

Location
307 Osburn Hall
Millersville University
Millersville

Social Hour
5:30 pm
–this event is alcohol free

Dinner
6:00 pm

Cost
$25 - members
$35 - guests
$15 - students

RSVP
March 21 by noon at
slcreservation@gmail.com

Expanded gamut printing is an approach in color reproduction that expands the color gamut of conventional CMYK printing processes via the use of additional colorants, such as Orange, Green, and Violet inks. This study evaluates the ability of commercial color management software to create an accurate solution for an expanded gamut printing system. In this study, two printing processes were used, an Epson SureColor P9000 inkjet printer/proofer and an HP Indigo 7900 digital production press, both with 7-color expanded gamut ink sets. Software solutions from Alwan, CGS ORIS, ColorLogic, GMG Color, Heidelberg, and Kodak were evaluated. The systems were tested to see how well they could reproduce the colors in the entire PANTONE+ Solid Coated spot color library. It is shown that the solutions are able to reproduce 89% to 94% of the spot colors on the Epson P9000 inkjet printer and 77% to 87% of the library on the Indigo 7900, both to less than two CIEDE2000 (a typical tolerance in label and packaging work). The number of color patches in expanded gamut characterization test charts was noted, as this is still an area of proprietary, nonstandardized working practice.

There are many different colorant combinations that can make the same color in expanded gamut printing. The ink build created by the different software solutions was studied, as it relates to press stability through appropriate choice of colorants. Pantone and Adobe provide everyday commercial tools for expanded color workflows. The study identified some issues with products from these companies that could confuse a less-skilled user in a busy production environment. The conclusion of the study is that expanded gamut solutions for spot color printing produce totally acceptable results for digital printing processes; expanded gamut printing is ready, here and now. The findings show that expanded gamut printing can replace cumbersome conventional spot color workflows creating considerable savings and advantages, especially for label and packaging printers..

Abhay Sharma has a PhD from Kings College, London and has worked for FujiFilm, UK and Western Michigan University. Abhay is former Chair and currently Professor, School of Graphic Communications Management, Toronto Metropolitan University. He is author of a recently published reference text book, *Understanding Color Management, 2nd Edition,* Wiley, 2018.